

New Zealand LNG Import Feasibility Assessment Addendum on Small-scale LNG Public Release Summary

First Gas Ltd

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Context

The New Zealand LNG Import Feasibility Assessment Addendum on Small-scale LNG report (“Small-scale LNG Assessment”) was prepared solely for First Gas Limited, Contact Energy Limited, Genesis Energy Limited and Meridian Energy Limited (the “Addendum Parties”) for internal use only. This Public Release Summary has been prepared and published by First Gas Limited with Gas Strategies’ agreement. Gas Strategies’ responsibilities in respect of the Small-scale LNG Assessment and this Public Release Summary are solely to the Addendum Parties.

As further described in this Public Release Summary, the purpose of the Small-scale LNG Assessment was to quantify and cost the volumes of LNG that could feasibly be imported into New Zealand through small-scale LNG, i.e. using smaller LNG vessels than those conventionally deployed in order to avoid infrastructure investments costing hundreds of millions of New Zealand dollars. The work was conducted by the same consultants that conducted the New Zealand LNG Import Feasibility Assessment that is the subject of a separate report dated 20 December 2024 for which a separate public release summary has been prepared. The report on the Small-scale LNG Assessment was concluded on 15 May 2025.

Disclaimer

The New Zealand LNG Import Feasibility Assessment Addendum on Small-scale LNG report has been prepared by Gas Strategies with the degree of reasonable skill and care to be expected of consultants specialising in the area of energy consultancy. Such advice and information is provided in good faith and may include advice and information obtained from third party sources. The advice given is based upon the information available to Gas Strategies (such as the state of the market) and the methods applied by Gas Strategies at the time the advice is given or the report prepared. All advice and information is open to interpretation and typographical error. This Public Release Summary has been approved by Gas Strategies as being representative of the findings and conclusions of the Small-scale LNG Assessment and no action has been taken to update those findings and conclusions to this Public Release Summary date.

1 Introduction and approach

This Small-Scale LNG Assessment (the “Small-Scale LNG Assessment”) is an addendum to, and should be read in conjunction with, the New Zealand LNG Import Feasibility Assessment (“2024 Assessment”).

The purpose of this Small-Scale LNG Assessment is to quantify and cost the volumes of LNG that could feasibly be imported into New Zealand through small-scale LNG, i.e. using smaller LNG vessels¹ than those conventionally deployed in order to avoid infrastructure investments costing hundreds of millions of New Zealand dollars.

The Small-Scale LNG Assessment has been conducted by the same consultants that conducted the 2024 Assessment (Gas Strategies Group Limited and Wood Beca Ltd) but is less exhaustive. The approach taken has been to work closely with the funders of the Small-Scale LNG Assessment to identify, describe and evaluate an indicative selection of small-scale concepts to draw out key benefits and trade-offs for further consideration.²

Also included in this Small-Scale LNG Assessment is a review of commercial considerations which includes the derivation of a benchmark small-scale landed LNG price.

2 Key Conclusions and next steps

- It is technically feasible to develop small-scale LNG imports into New Zealand assuming LNG can be purchased from an existing Australian LNG project. Siting of the import terminal at Port Taranaki would offer material advantages over other locations in terms of the use of existing infrastructure including the Ahuroa Gas Storage (“AGS”) facility which offers the opportunity to reduce the volume of expensive cryogenic storage.
- Assuming a typical small-scale LNG value chain with a 15,000 m³ LNG carrier (“LNGC”) ‘shuttling’ back and forth between Australia and Port Taranaki, up to ca. 9 PJ of LNG could be delivered annually. The vessel size is scalable such that a 20,000 m³ vessel would deliver up to ca. 12 PJ of LNG annually. However, potential LNG suppliers will find larger vessels and more frequent loading more disruptive to planned loading arrangements and are likely to seek higher levels of compensation or even be unwilling to enter into supply arrangements altogether.
- Gas Strategies has assessed the benchmark small-scale landed LNG price in Port Taranaki for the ca. 9 PJ case as US\$11.41/MMBtu to US\$11.92/MMBtu, or NZ\$20.10/GJ

¹ This Small-Scale LNG Assessment describes as a base case the use of a 15,000 m³ LNG carrier, equivalent to ca. 330 TJ. This compares with conventional-scale LNG carriers of ca. 180,000 m³ as described in the 2024 Assessment which are equivalent to ca. 4.5 PJ

² The Small-Scale LNG Assessment has been funded by Contact Energy Limited, First Gas Limited, Genesis Energy Limited and Meridian Energy Limited. The 2024 Assessment was funded by Contact Energy Limited, First Gas Limited, Genesis Energy Limited, Mercury NZ Limited and Meridian Energy Limited.

to NZ\$21.00/GJ.³ If the same JKM (Japan Korea Marker) price basis is applied to the 2024 Assessment, the benchmark prices for small-scale landed LNG are around 25% higher. The small-scale landed LNG price includes the cost of transporting LNG to Port Taranaki including chartering a small-scale LNGC, whereas in the 2024 Assessment such costs were the responsibility of the supplier and included in the spot cargo price unrelated to a specific source location.

- The landed price stated above excludes the costs for receipt, storage and treatment of the LNG onshore. CAPEX and OPEX estimates have been developed for a small-scale onshore terminal at Port Taranaki under two high-level configurations: Standard Configuration and Minimum Storage. These configurations are summarised in Table 1.

Table 1: High-level comparison of small-scale LNG concepts at Port Taranaki

	Standard Configuration ⁴	Minimum Storage
LNGC size	15,000 m ³	15,000 m ³
LNG delivered annually	ca. 9 PJ	ca. 7 PJ
Use of AGS facility	No	Yes ⁵
LNG storage volume	15,000 m ³	3,000 m ³
Number of cargos / year	ca. 27 (every 13 days)	ca. 22 (every 16 days)
Mid-case Landed LNG Price	NZ\$20.55 /GJ	NZ\$21.36 /GJ
Terminal CAPEX⁶	ca. NZ\$295 million	ca. NZ\$140 million
Annualised Cost including LNG⁷	ca. NZ\$230 million/year	ca. NZ\$170 million/year
Delivered Cost of LNG	ca. NZ\$26 million/PJ	ca. NZ\$24 million/PJ

The 2024 Assessment presented annualised costs of terminal infrastructure, excluding LNG, of NZ\$170–210 million. It is not possible to compare the small-scale LNG annualised costs presented in this Small-Scale LNG Assessment with the 2024 Assessment annualised costs on a like-for-like basis because the value chains are structured differently. The 2024 Assessment envisaged the occasional purchase of spot LNG cargoes on a flexible “as needed” basis, but in the case of small-scale LNG there would

³ Before considering the effect of inflation; commodity cost is based on an expected price in 2029 which is likely to change; conversion assumes an exchange rate of 1.67 NZ\$ per US\$.

⁴ Four variations of the Standard Configuration were costed with different technology options; average figures are presented.

⁵ This Small-scale LNG Assessment makes no specific assumptions about how the existence of an import terminal would interface with the existing commercial arrangements in relation to the use of the AGS facility. None of the estimated costs presented consider incorporation of the AGS facility as part of a LNG terminal.

⁶ Includes Owner's Management Costs.

⁷ Includes amortisation of CAPEX (excluding Owner's Management Costs), OPEX and losses in regasification where applicable; commodity cost is based on an expected price in 2029 which is likely to change.

be an ongoing term obligation to purchase LNG, making the landed LNG price a fundamental component of the project cost. However, if the estimated LNG cost related to a demand of 9 PJ⁸, ca. NZ\$145 million per year⁹, is added to the 2024 Assessment annualised costs of NZ\$170–210 million, it is evident that the small-scale concepts including the expected cost of LNG have a 25-35% lower annualised cost.

- The development of a small-scale LNG concept is likely be constrained by the modalities and commercial arrangements of the LNG supply source. The operational risk is that episodic poor metocean conditions at Port Taranaki could lead to the LNGC being unable to unload its cargo and return to Australia within the next loading window. Existing project offtakers will not want to accept disruption to their own loading schedules for the purposes of serving a small-scale trade, so agreeing operational terms in the LNG supply agreement to accommodate these risks without triggering traditional “take or pay” obligations will be key.
- Should LNG production cease at the Australian LNG facility whilst New Zealand demand remains, there are possible alternative sources within the wider region and it may be that the LNG value chain evolves towards a conventional-scale solution.
- With the study having concluded the potential technical and commercial viability of a small scale solution, community, iwi and other stakeholder discussions and input is critical to provide a more holistic assessment of the options.
- Progressing small-scale LNG imports beyond this Small-Scale LNG Assessment will require the project partners to engage with existing offtakers, port operators and small-scale vessel owners among others. Prior to these engagements, project partners should develop a clear commercial business model and rationale around LNG, alongside clarity in relation to New Zealand political and regulatory support. This should include matters such as which entity is purchasing LNG, credit support, the ownership of infrastructure, how that is paid for and how the regasified LNG is sold to downstream players in New Zealand. Preparation through these activities will build vital credibility and aid negotiations.

⁸ As described in the 2024 Assessment, dry year demand is approximately 10 PJ. A figure of 9 PJ is used here for comparative purposes.

⁹ Priced at average JKM+0.25 \$/MMBtu in 2029, exchange rate US\$1 = NZ\$1.67.