

## LNG Shipping: the vital link in LNG supply and demand growth

Claire Wright

Spot rates of \$100,000 a day would be the envy of any sector of shipping. Rates of this level in the LNG market at the moment have sparked interest from companies not currently active in the sector and have seen the orderbook jump from less than 7% of the fleet to nearly a fifth.

Although this orderbook is low compared to the bulk and tanker orderbooks, it has still prompted fears of 'carnage' for LNG ship owners in a few years time as these new ships enter service, potentially without contracts to carry cargo. It is likely these fears are overstated: Australia, energy diversity and fleet renewal suggest a positive outlook for LNG shipping.

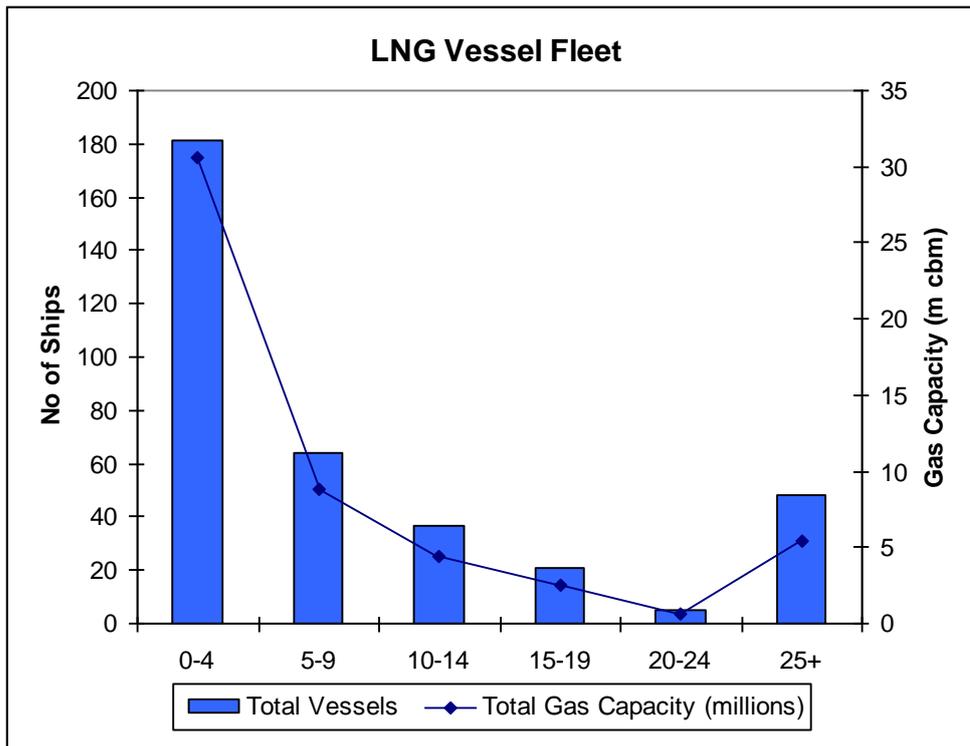
While the dry bulk, tanker and even container markets have been subject to the vagaries of supply, demand and spot rates, LNG ships have not until recently really been seen as part of this 'normal' shipping market. They are still sometimes referred to as a 'floating pipeline', which only exist because the distance between the LNG producer and consumer is too far or too complicated to build a physical pipeline.

This producer/consumer relationship is unique in the maritime world. LNG vessels were traditionally built as part of a long-term contract between an LNG producer, such as Indonesia or Qatar, and an LNG importer, such as Japan. The fleet of ships then spent 20 years or so on dedicated charter carrying LNG from exporter to importer, then ballasting back to the exporter to collect another cargo.

The LNG market is changing and these changes mean that within the next five to ten years the LNG fleet will need to grow.

### The Fleet

The LNG fleet is a young one in shipping terms; while maritime trade has been around for centuries, the first LNG vessels weren't built until the 1960s and only 15 have so far been scrapped. The fleet numbers only in the region of 360 vessels and nearly a fifth of these is over 20 years old. Although LNG vessels do trade into their 30s, many of these are likely to need replacing in the next ten years, so a large proportion of the fleet currently on order, around 60 vessels, could be seen as necessary fleet replacement.



The vast majority of the fleet is under 5 years old, a trend also seen in other sectors of shipping, such as the container market, after the newbuilding boom of the last decade. What is different about the LNG fleet is that the current utilisation is, comparatively, very high.

Roughly 340 loads of LNG take place each month. Out of a fleet of just over 360 vessels this suggests a good utilisation rate, particularly when compared with the other main liquid energy trade: crude oil. The largest crude oil carriers, the VLCCs, load around 280 cargoes a month, out of a fleet of around 600 vessels.

There is, therefore, not much slack in the LNG vessel market at present. If LNG exports and imports are to grow, the fleet will need to grow with them.

### Growing Exports

Qatar is currently the world's biggest LNG exporter, loading around 80 cargoes a month for export primarily to Asia and Europe. Australia, fifth in the world's league table of LNG exporters, loads an average of 26 cargoes a month.

By 2020, only nine years away, Australia is expected to have matched, if not overtaken, Qatar as the world's largest exporter of LNG. Within the next nine years, therefore, Australia is going to be loading significantly more than its current 26 cargoes a month. With the LNG fleet in such high demand that it is supporting spot rates of \$100,000 a day at the moment, the need for new ships to service this growth in export capacity is evident.

The average size of vessels calling to load in Qatar is 170,000 cubic metres (cu m), compared with under 140,000 cu m in Australia. Australia's main markets are in Asia, where the average vessel discharging is less than 170,000 cu m in size and larger vessels cannot be accommodated due to terminal infrastructure limitations. Qatar can load much larger vessels, up to its 266,000 cu m Q-MAX because these vessels discharge in Europe, in terminals purpose built to handle this size of ship.

To load the volume Qatar exports now in vessels 140,000 cu m in size would require over 100 loads a month, 20 more than Qatar currently loads. By the end of this decade, therefore, Australia can expect to be loading more than 100 vessels a month, compared to its current 26.

Combined with other potential export growth, in Angola, Papua New Guinea and perhaps Brazil, Canada and Iran, and the scope for increased vessel demand is potentially strong.

Where the fleet could encounter a short-term lack of employment is in the 2013 to 2016 period. Two-thirds of the current orderbook, around 40 vessels, is due for delivery in 2013 and 2014. It is likely that several of Australia's new projects due to start up in 2014 will be delayed. So while export growth should be strong in the second half of this decade, there is likely to be a period of very tight supply and, perhaps, a shortage of cargos for the new vessels, in the middle of the decade.

## **Demand Patterns are Changing**

LNG is likely to play an important role in the world energy mix in future as a safe and lower carbon fossil fuel. Demand is growing both in countries that have traditionally imported LNG, such as Japan and South Korea, and amongst new importers seeking energy security in diversity of supply.

Japan's long term decisions regarding its future energy mix are bound to have a significant impact on world demand for LNG. As the country takes a third of world supply, this is inevitable. While the current high levels of imports, around 125 cargos in each of July and August, compared to a more normal 110, will not be maintained in the long-term, higher demand is likely for the next two to three years.

Several European countries are investing in LNG import facilities to diversify sources of natural gas and enhance their security of supply or to supply regions not connected to other gas grid infrastructure. Poland is a case in point with its new terminal on the Baltic Sea near Swinoujscie.

Demand in the Pacific Basin is also likely to grow significantly, both from the familiar sources of growth; China and India, but also from new importers. Thailand, Indonesia and Vietnam are all either importing or planning in the near-term to begin importing LNG.

One thing that characterises many of these new importers of LNG is that they will be importing much smaller volumes and in smaller parcel sizes than the LNG behemoths Japan and South Korea and many will opt for short-term contracts. Where an LNG terminal acts as part of a country's energy diversity strategy, they may even look for more opportunistic cargos or spot deals. This is certainly a strategy China has adopted for some of its import cargos.

## **Shipping Patterns**

The market for LNG is changing in such a way that the opportunities for ship employment will grow in coming years, and they could grow more than the raw figure of LNG volumes exported or imported would suggest. More spot trades or short-term contracts and more diversity of suppliers and consumers gives the potential for a more complex pattern of laden voyages.

The greater the spread of trading patterns across the globe, the greater the scope for vessel activity. Just as an example, several South American countries have started importing LNG in recent years. As the first LNG importers in the southern hemisphere, not only is their demand highest when demand is lowest in the traditional demand areas in Northern Europe and Asia, but as their cargos thus far have predominantly come from West Africa, Qatar, Yemen and Trinidad and Tobago, rather than nearby Peru, the laden voyage is a lengthy one for vessels serving these terminals.

The range of LNG importing countries in the world is expanding. This is important for shipping, as the wider the range of countries importing, the more options there are for laden shipping voyages and for minimising ballast voyages. If many of the new vessels entering service in a few years are traded on the spot market, this becomes an important factor for their profitability.

There is, for example, currently no triangulation in LNG. In the bulk trades, a vessel will try to minimise its ballast voyages, by loading in Australia for discharge in Europe, then ballasting the short distance across the Atlantic to load in Brazil for discharge in China. In this ideal scenario, this then leaves just the short ballast down to Australia for another load.

In LNG a vessel contracted to take LNG from, say, Australia to Kuwait during the latter's summer will not then load in nearby Qatar for discharge in Japan before reloading in Australia. The vessel will instead discharge in Kuwait and then ballast back to Australia. Because most of the LNG fleet is on long-term charter to one project, the ballast leg is not an important cost to the ship owner/charterer that needs to be minimised to facilitate profitability.

During 2010, it was a little incongruous to hear other shipping markets, most publicly the container market, talk about the need for slow steaming to reduce cost and help maintain charter rates, while LNG vessels were still ballasting back to their load ports at more than 20 knots.

If the trend towards short-term and spot contracts and greater diversity of trading patterns does continue, then LNG shipping in ten years time is likely to look much more like other shipping markets, such as dry bulk and tankers, than it does now. But with continuing high demand for the commodity in countries seeking lower carbon fossil fuels, it could still be the envy of other sectors.

## Notes

This is an extended version of an article previously published in Lloyd's List newspaper.

Claire Wright heads up the team of analysts at Lloyd's List Intelligence.

Lloyd's List Intelligence does not guarantee the accuracy of the information contained in this publication, nor accept any responsibility for errors, omissions or their consequences. Unauthorised reproduction, wholly or in part, is strictly prohibited.

## About Lloyd's List Intelligence

Lloyd's List Intelligence provides business information to support the global maritime and trade communities. By combining accurate data with analytical tools and insight from a global team of expert analysts, we provide business solution you can rely upon.

Divided into industry specific channels, Lloyd's List Intelligence removes the complexity of information available by delivering data and analysis with only direct relevance to your market.

Our success has been built on the experience and knowledge of our people. The diverse background and expertise of our analyst team ensures that we remain connected to every market in the maritime domain. So we can provide commercial value to your business, making you stronger.

For more information visit: [www.lloydslistgroup.com/li](http://www.lloydslistgroup.com/li)