7. LNG Vessels

Natural gas is the cleanest, most efficient fossil fuel available, and it's in high demand around the world. When chilled to -160°C, natural gas becomes a liquid, shrinking to 1/600th of its original volume. This makes it efficient and economical to send to overseas markets.

Shipping advantages

As of October 2014, there are 18 industry projects proposing to produce and export liquefied natural gas (LNG) from plants along B.C.'s coast. A key part of the B.C. government's LNG strategy is to promote the advantages ports in Kitimat and Prince Rupert offer.

Prince Rupert is the shortest trade route between North America and export markets in Asia. It is sheltered and ice free year round, has one of the deepest natural harbours in the world, and has modern, state-of-the-art facilities. It has unobstructed entry to shipping lanes in the Pacific Ocean, and there are no significant hazards such as narrow channels to navigate.

Transportation of LNG within British Columbia waters will be tightly regulated. Tugboats will help LNG vessels safely navigate through inland waters.

LNG carriers are built to rigorous international standards. Construction is supervised by third-party inspectors, and all ships must have international certification to carry liquefied natural gas.

Strong safety record

- Last year, approximately 240 million tonnes of LNG were traded around the world.
- 350 carriers have completed more than 135,000 voyages, travelling more than 240 million kilometres at sea.
- There has been no significant incident resulting in a loss of cargo at sea or in port.

In the unlikely case of a leak, there is a low risk of environmental damage. Liquefied natural gas is colourless, odorless, non-toxic and non-corrosive. As LNG warms up from -160°C, it will evaporate and return to a gaseous state, dispersing into the atmosphere.

There are detailed emergency response plans in place for transporting LNG, and all precautions are taken to ensure safety.

Points to consider:

- **Shipping safety is addressed in construction and ongoing inspection of ships, and in their passage from port to shipping lanes. What else could be done?**
- **Is it possible to address unforeseen risks (e.g. sudden and extreme weather changes, human error)?**

Dig a little deeper:

- **Carriers are specifically designed to contain LNG.**
- **All LNG-certified ships have double hulls.**
- **Cargo tanks are separated from the hull structure by thick insulation.**
- **Vessels are inspected once a year, with a full dry-dock inspection every five years.**