

# CANADA'S LIQUEFIED NATURAL GAS OPPORTUNITY



## ABOUT LNG

Liquefied natural gas (LNG) is natural gas cooled to  $-162^{\circ}\text{C}$  to become a liquid. Liquefaction reduces the volume of natural gas so that it can be transported safely and efficiently by ship to overseas markets where it is converted back to a gaseous state.

## THE NATURAL GAS RESOURCE IN CANADA

Natural gas can be found across Canada with most of the resource available for overseas export via proposed West Coast terminals originating from western Canada's shale gas reserves in northeast British Columbia and Alberta.

The Horn River and Montney natural gas basins, situated in northeast B.C. and Alberta, are estimated to contain up to 527 trillion cubic feet (Tcf) of natural gas. Alberta's Duvernay natural gas basin contains 77 Tcf, while the Liard basin is an emerging future prospect in B.C. with 219 Tcf of natural gas. Together, these basins are enough to supply at least 250 years at current Canadian demand.

*Source: National Energy Board, 2017*

Atlantic Canada, specifically Newfoundland and Labrador, Nova Scotia and New Brunswick, is also a source of natural gas with an estimated 91 Tcf of natural gas resources. The key to developing Atlantic Canada's resources hinges on attracting investors to help unlock the abundant natural gas reserves in the region.

*Source: National Energy Board, 2018*

## THE NEED TO ACT

The Canadian oil and natural gas industry needs to access new markets in countries where demand is growing if it is to realize its resource potential. Canada currently only exports natural gas to the United States. Although 2016 and 2017 saw a minor increase in natural gas exports to the U.S., there has been a steady decline in natural gas exports since 2007, as the U.S. has developed its domestic supply of natural gas. In fact, the United States is now a net exporter of natural gas for the first time in 60 years.

*Source: Energy Information Agency, 2018*

Global LNG markets are highly competitive and Canada's natural gas industry must face well-established international suppliers such as Qatar, and emerging

## CANADA IS THE WORLD'S FIFTH-LARGEST PRODUCER OF NATURAL GAS.

While total annual production reached 5.5 Tcf in 2017, Canada's tremendous resource base could support significantly more production as new markets, such as LNG exports, are developed.

*Source: CAPP, 2018*

## FUTURE MARKETS

Asian markets would be an eight-day to an 11-day sail from proposed LNG terminals on Canada's West Coast.



suppliers like the U.S., Australia and Russia. It is critical that Canada take advantage of the next window of opportunity for LNG emerging by 2024.

World demand for natural gas is expected to increase 45 per cent by 2040, driven primarily by rapidly expanding Asian economies. India and China will need an additional 51 Bcf/d of natural gas, which is three times more natural gas than Canada produced in total in 2016. An LNG industry in Western Canada can play a key role in supplying this demand for clean, affordable and reliable energy.

Source: International Energy Agency, 2017 and NEB

## BENEFITS OF ESTABLISHING AN LNG INDUSTRY

Significant potential economic benefits from establishing a Canadian LNG industry and resulting natural gas development could be generated across Canada if natural gas projects are established in a timely manner and are able to access international markets.

Currently, there are several LNG export projects proposed for Canada's West Coast. The cumulative proposed capacity of these projects could be 30 billion cubic feet per day (Bcf/d), which is twice Canada's current level of natural gas production and would go a long way towards satisfying growing global demand.

### DEVELOPING A 30 MILLION TONNES PER ANNUM LNG INDUSTRY IN B.C. COULD POTENTIALLY PROVIDE CANADA WITH:

- **\$3.2 BILLION TOTAL IMPACT** on federal government revenues annually.
- **\$3.0 BILLION TOTAL IMPACT** on government revenues annually for British Columbia.
- Increase national employment by an annual average of **65,000 JOBS**.
- Reduce British Columbia's unemployment rate by an average of **0.5 PER CENT** over the 30 year period.

Source: Conference Board of Canada, 2016

## THE LNG OPPORTUNITY FOR CANADA'S FIRST NATIONS

First Nations communities will also see a significant increase in economic benefits, skills training and environmental stewardship if proposed natural gas pipelines and LNG infrastructure projects proceed within their traditional territories. In British Columbia, for example nearly 90 per cent of the 32 First Nations with proposed pipelines through their traditional territories have indicated their support through one or more pipeline benefits agreements.

Source: Government of British Columbia

## GREENHOUSE GAS EMISSIONS OF LNG COMPARED TO COAL

Natural gas is the cleanest burning fossil fuel. Used in power generation, it emits about 40 per cent of the carbon dioxide compared to coal. It also emits less air pollutants and can significantly reduce smog when used instead of coal to generate electricity.

A West Coast LNG industry, exporting about 30 million tonnes per year, would grow Canada's economy by an average of **\$7.4 BILLION** per year over the next 30 years. This increased international trade would generate substantial new government revenues, economic growth and jobs.

Source: Conference Board of Canada, 2016

**NATURAL GAS  
POWER GENERATION  
EMITS NEARLY**

**40%**

**LESS CO<sub>2</sub> COMPARED  
TO COAL**

Natural gas is a cleaner energy source.

Source: Arc Energy and CAPP