

Woodfibre LNG: World's Lowest Emission LNG Facility Featuring E-Drive and Modular Execution

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WLNG PROJECT SUMMARY

- Woodfibre LNG (WLNG) Project is located near Squamish (Skwxwú7mesh), British Columbia, Canada
- Projected start-up date is 2027
- Single LNG train with an LNG rundown capacity of 2.1 MTPA
- Feed gas is supplied via pipeline operated by FortisBC
- Air Products C3MR Liquefaction Process
- E-Drive Refrigerant Compressors
- Modular Construction
- Significant Indigenous involvement with Skwxwú7mesh Úxwumixw (Squamish Nation) as Environmental Regulator



WLNG PROCESS SCHEME

ACID GAS INLET REMOVAL FACILITIES MERCURY HM ACID GAS REMOVAL FLASH GAS DEHYDRATION FEED THERMAL ► REGEN GAS RETURN OXIDIZER REGEN GAS SUPPLY WATER BOG TO RECYCLE Q (4) (1)LNG 6 3 FLOATING STORAGE TANKS SCRUB ∞ ∞ ∞ COLUMN MAIN CRYOGENIC PROPANE HEAT EXCHANGER LOOP 8 CONDENSATE STABILIZATION MR LOOP ∞ NITROGEN METHANE • -(1)(2)(3)CONDENSATE ETHANE -PROPANE 4 Gastech Climatetech & Al Hydrogen



INDIGENOUS INVOLVEMENT

- Woodfibre LNG is proud to recognize the Skwxwú7mesh Úxwumixw (Squamish Nation) as a regulator of the Woodfibre project.
- Environmental Certificate includes 25 conditions that must be met and maintained over the Project's lifecycle.

Key WLNG Responsible Conditions include:

- Economic Benefit Agreement;
- Manage and monitor marine water quality to protect marine life and human health;
- Manage and monitor marine fish and fish habitat during construction and operations





Photo Credit: Woodfibre LNG



SITE WORK CHALLENGES

Site is only accessible by ship

- Limited construction windows to prevent impacts to wildlife (e.g. herring spawning)
- Site history of industrial facilities dating to the 1920's
- Footprint adds logistical challenges as storage and laydown areas are very limited







PROJECT CHALLENGES

FST (floating storage tank) Conversion

- Two sister LNG Carriers from the late 1970s are converted to floating LNG Storage
- > All top-side piping is removed and replaced
- Detailed laser scans of existing ships are overlaid with the 3D model to provide tailored isometrics for each tank dome

> LNG Loading Platform located on FST2







WORKER ACCOMODATIONS

- Due to space constraints and to minimize impact on local communities, on-site workforce will be housed in a floatel
- Powered by renewable power from BC Hydro







MV Isabelle X during mooring at WLNG Site



LOW CARBON LNG FEATURES



The Woodfibre LNG project will have among the lowest greenhouse gas (GHG) emissions per ton of LNG produced of any operating or planned LNG facility

Low Carbon Features:

- Efficient Liquefaction technology (Air Products C3MR)
- E-drive (electric drive) Compressor Configuration with full-settle out compressor restart
- Renewable power import using local hydroelectric power
- WLNG's commitment to reduce fugitive emissions



Woodfibre LNG has developed a plan to achieve net zero decades before the Canadian Net-Zero Challenge target of 2050



LOW CARBON LNG FEATURES







MODULARIZATION EXECUTION STRATEGY



Woodfibre LNG Project Modules:

- > 9 Process and 9 Pipe Rack Modules
- > Total Gross weight of 36,000 MT
- Fabricated at QMW
- Liquefaction Module is over 10,000 MT
- >90% of the Piping is in the Modules
- Detailed Material Handling Studies
- Reduces Overall Project Execution Emissions



Qingdao McDermott Wuchuan (QMW) Module Yard



PROJECT CONSTRUCTION UPDATE

- > Existing Landfill capping completed
- Site Work and Foundations have started
- > Marine construction window opened in mid-August







Foundation Pour at WLNG Site





Woodfibre LNG Project Module and Piping Fabrication:



QMW Module Yard Pipe Shop



QMW Module Yard







Qingdao McDermott Wuchuan (QMW) Module Yard





















Qingdao McDermott Wuchuan (QMW) Module Yard







THANK YOU!

