



THE LOOKOUT

Your quarterly VMCC update



Founder's Message

Hello Colleagues and Industry Friends,

I hope this newsletter finds you well and that you've had a wonderful spring!

With the 2023 wildfire season ramping up and an early heatwave in May, we're seeing the regional impacts of climate change firsthand. These events, coupled with the outlook of a hot and dry summer, are a stark reminder of the need to shorten the path to net zero and curb the effects of climate change here in our region.

Thankfully, as an industry coalition, we've been working together through Operation Flagship and our Work Group program for over two years! I am constantly inspired by this remarkable group of innovators and excited to see what the future holds. Thank you all for your enthusiasm and dedication to fighting climate change.

Together, we'll reach many new milestones as we accelerate decarbonisation across the maritime industry.

Elisabeth Charmley
Executive Director, VMCC



OVERVIEW:

- Founders Message
- Maritime Decarbonisation Powers Up
- B.C. Carbon Management Blueprint
- Silk Alliance Green Corridor Initiative & Resilience4Ports
- New B.C. Maritime Industries Strategy & Grant Program
- Brightspot Climate Develops World's First Net-Zero Strategy for an LNG Facility
- VMCC Celebrates 2nd Anniversary
- Funding Call: InnovateBC Awarding up to \$300,000 for BC-based research
- The Canadian Federal Budget & What it Means for the B.C. Maritime Sector

Maritime Decarbonisation Powers Up

Erik Johnston, Project Director/Mechanical Engineer Robert Allan Ltd.

Like an immense iceberg, the marine industry is slow to change course—but recent consumer habits are highlighting a shift in pace. Adoption rates for low-carbon technologies are climbing, and last year, 25% of all new orders at Robert Allan Ltd. were for battery electric vessels, with another 10% for decarbonisation solutions (i.e. hybrid, methanol, LNG). In comparison, 18% of new vehicles in British Columbia were electric—the highest electric vehicle adoption rate in the country.

This means, with a quarter of our orders being electric vessels, global workboat owners and builders are adopting decarbonisation technologies at a faster rate than the average B.C. consumer, for assets that have an average lifespan that doubles that of the cars in our driveways. These vessels are being ordered with little or no government subsidies or rebates, and at a higher price than standard diesel vessels. We are eagerly anticipating seven low-carbon tugs for two different operators, to arrive on the West Coast by the end of 2023.

Our vessel operator and shipbuilding customers now want clean powering solutions in greater numbers.

Another 25% of our new orders include diesel engines with exhaust gas after-treatment (NOx and particulate matter reductions)—including for regions outside of Emissions Control Areas where this technology is not mandated. This leaves just 40% of projects with traditional diesel engines. Three years ago, 90% of new business would have been projects with diesel engines only.

It might have been true in the past that the marine industry was comfortable with the traditional ways of doing things. The present is the polar opposite. Life in our design office is electrifying as we charge ahead to a brighter future filled with new powering options—future fuels and batteries abound!

B.C. Carbon Management Blueprint

The B.C. Centre for Innovation and Clean Energy, in partnership with Deloitte Canada, released the B.C. Carbon Management Blueprint earlier this spring.

This study provides an understanding of B.C.'s existing carbon management approaches, the value chain, and the market participants that drive the supply and demand of these solutions. It serves as a foundational document for B.C. innovators, industry leaders, academia, policymakers, and Indigenous rights holders seeking to:

- Gain insight into both short-term and long-term opportunities for carbon management innovation and the carbon offset market in B.C.
- Identify unmet needs and technology gaps in high-emitting industries, including oil and gas, cement, mining, steel, and heavy-duty transportation.
- Implement competitive clean energy policies and market accelerants that attract new investment and retain world-leading companies in B.C.



TO LEARN MORE



Download the Report:
<https://bit.ly/3MAqLtf>



Read the Announcement:
<https://bit.ly/436Yf7Z>



CICE

Deloitte.

Silk Alliance Green Corridor Initiative Inspires Resilient Ports!

Ginger Garte, Environmental and Sustainability Director, Lloyd's Register Maritime Decarbonisation Hub

The Lloyd's Register Maritime Decarbonisation Hub (LRMDH) organised a workshop for members of The Silk Alliance Green Corridor Cluster project in Singapore on April 24th, 2023. Held at the National University of Singapore SDE3 Net-Zero Energy Building, the goal was to develop an implementation plan to pilot zero-emissions shipping in the intra-Asia container trade and facilitate the maritime industry's transition towards zero emissions ships and fuels ...and we won!

Our work was recognized during the awards ceremony for Singapore Maritime Week 2023!

The LRMDH's proposal "Development of a Route-based Action Plan Methodology based on The Silk Alliance," won the IMO NextGEN Connect Challenge.



Initiated by the LRMDH in collaboration with partners across the maritime supply chain, the Silk Alliance green corridor cluster project focuses on a decarbonisation pathway for a fleet predominantly bunkering in Singapore with trade across the wider Asia region.

Following the workshop, members were taken on a tour of the NUS SDE Zero Carbon Emission Building –Singapore's first net-zero energy building.

During the tour, guide Eddie Lau (Associate Professor, Deputy Head (Research) at the Department of Architecture for the NUS College of Design and Engineering) taught participants about the design principles and how the building was designed to meet new learning needs in the digital age, while also improving carbon performance.

As the first movers implement their decarbonisation blueprints, green corridor advancement will gain confidence and scale, with ports embedding resilience into their masterplans and connecting to renewable energy infrastructure. This will reveal the greatest carbon reduction impacts—when alternative marine fuels are produced using renewable energy and are built to deliver net-zero fuels from well-to-wake.



Resilience4Ports Holds First Roundtable

Ginger Garte, Environmental and Sustainability Director, Lloyd's Register Maritime Decarbonisation Hub

Ports are the key to the maritime energy transition. Port operators and users connect global and domestic fleets to net-zero marine fuel supply chains, helping the sector achieve its decarbonisation goals.

On April 26th the Resilience Rising – Resilience4Ports Innovation Lab held its first roundtable at Marina Bay Sands in Singapore.

Titled "Ports as a Gateway to Resilience: Advancing Maritime Adaptation and Resilience Breakthroughs," we engaged with C-level delegates from key port authorities, shipowners and operators, financiers and NGO's. This is just the start!

Only once sustainable, when resilient pathways are connected by ports, will resilient maritime infrastructure be the obvious choice. This collaboration brings together key stakeholders within and outside the maritime industry.

TO LEARN MORE 

 resiliencerisingglobal.org/resilience4ports/

 info@resiliencerisingglobal.org

New B.C. Maritime Industries Strategy Promotes Growth & Innovation

Big News for the Blue Economy in B.C.! Announced in May, the new B.C. Maritime Industries Strategy aims to modernize and grow the maritime sector by supporting clean fuels and related technologies, generating new, future-ready jobs, and maximizing opportunities for the sector.

What's Included?

➔ An investment of up to \$25 million in infrastructure and assets to enhance the capabilities of shipyards and attract more investment to the province.

➔ A new West Coast Maritime Office—supporting enhanced collaboration among industry partners, strengthening B.C.'s ability to respond to the National Shipbuilding Strategy (NSS) and other procurement initiatives, and facilitating new opportunities. The office will also promote Indigenous business development and procurement by engaging with First Nations, Métis and Indigenous businesses and organizations.

The funding for this initiative will funnel through the Province to the Association of B.C. Marine Industries (ABCMI), which will administer the B.C. Maritime Industries Infrastructure Modernization and Expansion Grant Program.

The strategy is a key part of the StrongerBC: Future Ready Action Plan, working to foster the development of skilled labour and management among shipyards and boat builders, and support the growing demand for technical training in data analytics, machine learning, automation, and fuel conversions.

TO LEARN MORE

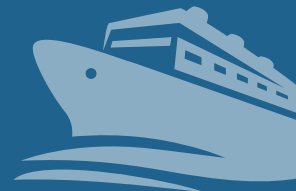


Read the Announcement:

<https://shorturl.at/EGL35>



A New Funding Stream for Maritime Industries in B.C.!?



The **B.C. Maritime Industries Infrastructure Modernization and Expansion Grant Program** presents an exciting opportunity for our membership and collective efforts as a coalition.

Invested by the Province and administered by the ABCMI, up to \$25M will be available for all B.C.-based businesses and for-profit organizations with projects that contribute directly to the modernization and development of regional infrastructure for boat or ship dry dock, or refit and maintenance facilities.

Program Details - How Can Members Apply?

There are two funding streams:

1. Smaller Capital Projects
 - Up to \$500,000; Maximum program contribution of 50%
2. Larger Capital Projects
 - Up to \$5,000,000; Maximum program contribution of 25%

When Can Members Apply?

Key dates and program details are still being released. Visit the website below for more details.

TO LEARN MORE



grantprogramabcmi.ca/



Brightspot Climate Develops World's First Net-Zero Strategy for an LNG Facility

Sheldon Fernandes

Director, Strategy & Innovation
Brightspot Climate

Brightspot Climate is proud to have led developing the world's first net-zero strategy for an LNG facility. The strategy was developed for Woodfibre LNG, a planned facility located north of Vancouver in Squamish, B.C. Woodfibre LNG is the first industrial project in Canada to recognize a non-treaty Indigenous government, Sk̓wx̓wú7mesh Úxwumixw (Squamish Nation), as an environmental regulator.

Brightspot's scope of work included:

- ➔ Exploring the current status of defining 'net zero', including alignment with the International Group of Liquefied Natural Gas Importers (GIIGNL) GHG Neutral Framework, Version 1.0 developed in November 2021;
- ➔ Developing the expected GHG emissions profile of the facility both during the construction and operational phases based on forecasted fuel use and facility design requirements in alignment with ISO 14064;
- ➔ Providing recommendations for technological emission reduction measures over the anticipated lifetime of the facility, and;
- ➔ Completing due diligence related to offset procurement and project development, focusing on local, B.C., nature-based offset projects with significant involvement of First Nations.

Our work was completed ahead of the provincial government announcing that all proposed LNG facilities in or entering the environmental assessment (EA) process will have to pass an emissions test with a credible plan to be net zero by 2030.



HIGHLIGHTS

- ➔ First LNG facility in the world to announce a comprehensive plan to become net zero.
- ➔ Lowest carbon intensive LNG facility in the world, with a carbon intensity of 0.04 (tonnes of carbon dioxide equivalent per tonne of LNG) based on current design.
- ➔ Facility will be net zero by the time it is operational by 2027, 23 years in advance of the Government of Canada's requirement to be net zero (by 2050).
- ➔ First approved liquefied natural gas (LNG) export facility to be powered by electric compressors using renewable hydroelectricity, resulting in 14 times fewer stationary combustion emissions than a conventional LNG facility.



Woodfibre LNG's roadmap prioritizes emissions avoidance and reduction opportunities, and we are proud to have a credible strategy in place that will make us the world's first net zero facility.

Christine Kennedy, President, Woodfibre LNG

Celebrate

On May 11, 2023, we came together to celebrate our second anniversary and our cumulative successes as an industry coalition. Held at the Loft at Earl's Yaletown in Vancouver, British Columbia we caught up with old friends, made new connections and toasted our second year of driving decarbonisation in the maritime industry.



*2 years
as change makers!*

INNOVATE BC'S IGNITE PROGRAM



Calling all Marine Industry Innovators (that's you!)

Innovate BC's [Ignite Program](#) is awarding up to \$300,000 to B.C.-based research and development projects that are creating game-changing innovations in the areas of natural resources, engineering and applied sciences.

Funding will support teams of academia and industry working together to solve a significant challenge affecting British Columbians.

Previous recipients have ranged from cleantech to energy to mining to forestry to agriculture and beyond. The Ignite program supports the Province's Stronger BC Economic Plan by providing local businesses with the funding needed to add value to industries, create new jobs and growth throughout B.C.'s economy.

innovate BC

KEY DATES

- Application deadline: July 3, 2023
- Deadline for invited applicants to submit their full proposal: September 11, 2023
- Anticipated notice of decision: December 2023
- Anticipated start of funding: Early 2024

TO LEARN MORE



innovatebc.ca/programs/ignite



The Federal Canadian Budget and what it means for the Maritime Industry in B.C.

Sheldon Fernandes
Director, Strategy & Innovation
Brightspot Climate

The federal Canadian budget was proposed in late March, and includes a suite of measures aimed at addressing climate change, and many with implications for the maritime industry in British Columbia.

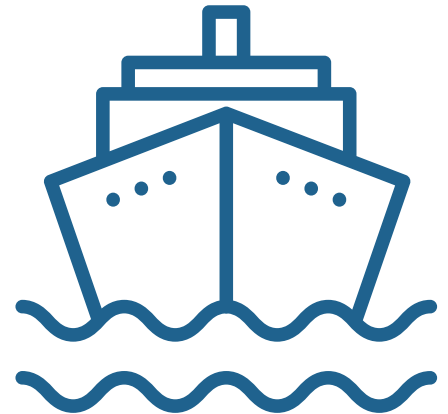
The foundational elements to the federal government's approach to climate mitigation is its:

- A) Large emitter pricing systems (in B.C., an Output-Based Pricing System to be in force by April 2024);
- B) Contracts for differences, which would backstop the future price of, for example, carbon, providing predictability that helps to de-risk major projects that cut Canada's emissions, and;
- C) The Clean Fuel Regulations, which apply to liquid fuel suppliers and importers.

The budget proposes adding a series of tax credits for clean technology manufacturers, and adopters, with specific credits targeted for clean electricity and clean hydrogen development. The budget adds further detail on CCUS-related tax credits, initially announced in 2022.

Strategic financial items include the Canada Growth Fund, a fund intended to de-risk projects (especially infrastructure projects) and encourage private investment, as well as an infusion of funding focused on clean electricity and green infrastructure through the Canada Infrastructure Bank.

Finally, the budget continues a series of targeted funding mechanisms based on intake, including the Strategic Innovation Fund and the Clean Fuels Fund.



www.vmcclimate.ca



info@vmcclimate.ca



www.linkedin.com/company/vmcclimate/

GET IN TOUCH



LET'S DO MORE-

LET'S DO BETTER-

TOGETHER.