



## Nautical Institute of BC Hosts LNG Seminar B.C.'s new "Gold Rush"?

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Hardly a day goes by now that there is not some mention of Liquid Natural Gas in one or more of the mainstream newspapers in British Columbia. In popular reporting, "LNG" is quickly becoming shorthand for a combination of Eldorado-like expectations, high finance, corporate struggles and environmental concerns.

For nautical professionals, however, LNG elicits greater interest regarding the technical and operational challenges of safely shipping this valuable cargo. Given that this is a new business for Pacific Northwest mariners, any offer of detailed information about the proposed LNG trade was bound to draw a robust crowd. This was indeed the case recently when the BC Branch of the Nautical Institute held an impromptu seminar on November 12 to explore this issue.

Responding to the call were 47 members of the Nautical Institute, the Company of Master Mariners of Canada, the Society of Naval Architects and Marine Engineers, the Royal Institute of Naval Architects, and also the Canadian Institute of Marine Engineers. With this forenoon event taking place at the Naval Officers Training Centre VENTURE, in Victoria, the gathering was also enhanced by the presence of interested engineers, watch-keepers and instructors of the Royal Canadian Navy.

### Voices of experience

The NIBC was graciously supported in this endeavor by the generous offer to speak of three well-qualified mariners:

Captain Gary Paulson, a former Naval Captain and graduate of the MBA program at Royal Roads University, has, since retiring from the RCN about seven

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years ago, been the VP Operations and Harbour Master of the Port of Prince Rupert. He tracked the spectacular rise of Prince Rupert Port Authority's fortunes since 2005 and PRPA's vision of further growth until 2020, and he outlined how closely the port's purpose dovetails with prosperity, not just for Prince Rupert and B.C., but also for Canada.

Captain David Kyle, our next speaker, was also a Naval Captain and, coincidentally, a former Commander of VENTURE. He earned his certificate as Master Mariner upon retiring from the RCN and has employed it since in work with BC Ferries and also the Pacific Pilotage Authority. This nautical background, together with his MBA from the University of Western Ontario, has made him invaluable as the marine advisor to Pacific Northwest LNG, one of the two proponents for gas terminals in Prince Rupert. Captain Kyle spoke of the global LNG trade and how the ownership of PNW LNG by Petronas, one of the world's pre-eminent producers and shippers of LNG, promises to import to B.C. the highest safety standards in the maritime industry.

Our third speaker, Captain Tom Wood, brought to the session his extensive involvement in the marine oil and gas industry. Since first apprenticed to British Petroleum's Shipping arm, BP Tanker Company, at the age of 15, he has amassed almost 50 years of experience afloat and

ashore in shipping, marine operations and marine projects. As a Master Mariner, his successful sea-going career culminated in his appointment as Fleet General Manager for Teekay Shipping. Founder of Wood Marine in 2002, he has since been extensively employed as an Independent Marine Consultant, participating globally in several major oil and gas construction projects. He was thus able to speak to attendees about the practical issues encountered in mega-project engineering at the coastal interface.

### Purpose and planning...to practice

The three speakers in this seminar were well qualified and ordered to cover the time-sequence of maritime energy trade development. From purpose and planning to practice, the seminar enabled a well-dovetailed discussion of the opportunities, imperatives and impediments of maritime trade development particular to LNG.

The competitive advantages of the Port of Prince Rupert have been well-mooted for many years now. The B.C. government's "Pacific Gateway" celebrates the Asia-Pacific connection, while PRPA growth exemplifies this. In the last eight years, the tonnage throughput of Prince Rupert has increased five times. While much of this is in container traffic, leveraging very short dwell-times and expeditious rail connections to the U.S. mid-west, increasingly the opportunities are leaning toward bulk

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cargoes. This is apparent further south in the novel approaches being developed to get energy resources to market...for example: Wyoming coal to Asia by way of Texada Island! PRPA is alert to the opportunities and also to the competitive imperatives associated with growing bulk exports: in the next seven years they see the investment of up to \$21 billion in

increasing their capacity for a wide range of bulk cargoes. Their strategic plan will ensure that all of the port-available property is fully developed and tenanted in 2020, leading to a tripling of ship-visits by that date.

Leading the charge in export growth is an emerging global race to service the growing energy demands of Asia,

principally China. In this case, the value of Canadian natural gas available for export is about to be overtaken by events. The U.S. is expected to become self-sufficient in energy by 2035, and the International Energy Agency expects the U.S. to overtake Saudi Arabia as the world's largest oil producer by 2015. Already, growing U.S. production of shale gas is prompting some Gulf operators to reverse the flow in their LNG import terminals. This establishes a window of opportunity to market Canada's commodity before it is overcome by other sources, a point emphasized by two of the speakers.

There is already a well-established industry in Canada for the production of natural gas. By partnering with experienced conveyors, this valuable cargo can be brought to foreign markets in a competitive and safe manner. The marine LNG shipping industry, of which Petronas is an exemplar, has a record of 150,000 voyages without loss of cargo containment. It is this safety record that the PNW LNG proponent aims to leverage in their combined maritime and marketing partnership.

Of course, there are some challenges and impediments to be overcome. The speakers at the NIBC seminar did not avoid dealing with the issues of social licence, environmental assessments and assurances, as well as demands for a workforce of advanced skills. Nor are these the only hurdles; practical attainment of the vision requires the greatest innovation to deliver major industrial components across the beach to a new site while dealing with the effects of weather, misfortune or modifications to plan. And all of this must be done in accordance with the driving imperative of the market and competitive timelines. In the case of Prince Rupert and LNG, NIBC heard that this is a race to load the first cargo by the end of the decade.

## Conclusion

The NIBC seminar attendees took away from this event a clear message about the opportunities for stimulation of the economy and the wider marine industry on the West Coast. Not only will the proposed projects have to adopt and institute the highest industrial and environmental safety standards in order to proceed, but the resulting improvements to navigation



Photo credit: David Kyle

*A pot of gold ahead on BC's north coast?*

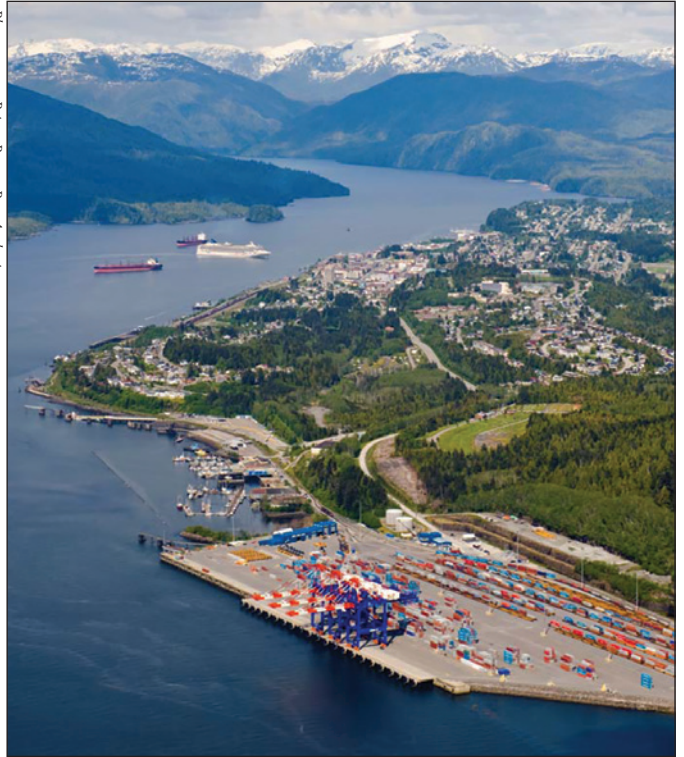
aids, pilotage, spill response and community growth will have a lasting positive impact on all users of the coast.

This brief seminar ended with the attendees availing themselves of the hospitality of VENTURE's Gunroom bar for a lunch-time social. The interaction of NIBC members with their professional colleagues from CMMC, RINA, SNAME and CIMarE allowed the morning's theme to be pursued in a less formal setting with a spectacular view over the inner harbour of Victoria. In fact, the view straight up the busy commercial/ recreational harbour and water aerodrome to the B.C. Legislature was a salient reminder that building the province's prosperity through best use of its waterways will require the co-operation of a large number of interested parties.

NIBC hopes that this kind of event will be an attractive model for addressing issues of collective interest to professional mariners on the west coast, and looks forward to the next opportunity to gather fellow institute members.

*Nigel Greenwood retired from the Royal Canadian Navy in 2012 with the rank of Rear-Admiral. As a Master Mariner, and principal consultant for Greenwood Maritime Solutions Ltd, he has since been active in security/risk assessments and maritime training. He is a Member of the Nautical Institute and currently the Vice-Chair of NIBC, a Fellow of the Royal Institute of Navigation, and also a member of the Board of Governors for Royal Roads University. He holds a BSc in Physics and Oceanography (RRCM) as well as an MA in International Studies (KCL). Occasionally BCSN allows him to indulge his passion for writing.*

Photo courtesy Prince Rupert Port Authority



Prince Rupert: a deep-water port with significant growth potential.

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