WEBVTT

00:00:10.376 --> 00:00:20.916
<v SPEAKER_2>Hello everyone, and welcome to Energy Security Cubed, one of the world's foremost energy security podcasts presented by the CGAI, or Canadian Global Affairs Institute.

00:00:20.916 --> 00:00:24.596
<v SPEAKER_2>I'm Kelly Ogle, Managing Director here at CGAI.

00:00:24.596 --> 00:00:32.536
<v SPEAKER_3>And I'm Joe Calnan, Vice President of Energy and Calgary Operations at the Canadian Global Affairs Institute.

00:00:35.756 --> 00:00:46.676
<v SPEAKER_2>For today's podcast, we're featuring a very timely discussion with Andrew Rae about the improvements to safety procedures for Canada's major energy ports on the Pacific.

00:00:46.676 --> 00:00:54.316
<v SPEAKER_2>But before we get into that, let's quickly discuss with Joe some of the news stories affecting global energy security writ large this week.

00:00:54.316 --> 00:00:56.216
<v SPEAKER_2>How are things, Joe?

00:00:56.216 --> 00:00:58.276
<v SPEAKER_3>Well, I'm doing well, Kelly.

00:00:58.276 --> 00:00:59.896
<v SPEAKER_3>Never a dull moment over here.

00:01:00.716 --> 00:01:02.676
<v SPEAKER_3>Preparing for 2026.

00:01:02.676 --> 00:01:08.516
<v SPEAKER_3>And for the people who will listen to this, we have a great suite of activities that we're going to be putting out.

00:01:08.516 --> 00:01:14.796
<v SPEAKER_3>I'm also going to be putting out a CGAI paper pretty soon here that's currently in the works.

00:01:14.796 --> 00:01:17.756
<v SPEAKER_3>That's going to be focused on Canadian energy in the Indo-Pacific.

00:01:17.756 --> 00:01:20.456
<v SPEAKER_3>So I'll be talking about that whenever it comes out.

00:01:20.456 --> 00:01:22.696
<v SPEAKER_3>But tons of stuff we're doing.

00:01:22.696 --> 00:01:25.736
<v SPEAKER_3>Very interesting times for Canadian energy.

00:01:25.736 --> 00:01:29.916
<v SPEAKER_2>Well, let's get right into that because there's big things happening here in Calgary this week.

00:01:29.916 --> 00:01:33.456
<v SPEAKER_2>It's in the news on every hour and on the hour.

00:01:33.456 --> 00:01:35.736
<v SPEAKER_3>Yeah, for sure.

00:01:35.736 --> 00:01:52.696
<v SPEAKER_3>Diving into that, we'll start with a quick discussion of the upcoming memorandum of understanding between the Federal Government and the Government of Alberta, which sets out some of the policy changes meant to clear the way for building a major new oil export pipeline to the coast of Northwest BC.

00:01:52.696 --> 00:02:05.036
<v SPEAKER_3>So according to numerous leaks, Prime Minister Mark Carney and Alberta Premier Daniel Smith will be jointly announcing the memorandum of understanding at a Calgary Chamber of Commerce event this Thursday.

00:02:05.036 --> 00:02:21.016
<v SPEAKER_3>So according to Post Media, CBC News and Global Mail reporting, big changes could include an exemption to the oil tanker moratorium, defanging the oil and gas emissions cap, and an Alberta exemption to the net zero clean electricity regulations.

00:02:21.016 --> 00:02:35.636
<v SPEAKER_3>These changes to federal policy were on the top of Alberta's wish list of desired changes to support continued oil and gas development and export, which is a major boon for Alberta's present and future economy.

00:02:35.636 --> 00:02:50.536
<v SPEAKER_3>So according to CBC reporting, these changes will be contingent on Alberta reinforcing its industrial carbon pricing scheme and the commitment of oil sands companies to invest in the Pathways Alliance carbon capture and storage project.

00:02:50.536 --> 00:03:00.876
<v SPEAKER_3>The question after this is whether companies will be

confident enough to spend the billions required to not only build a major new pipeline, but also to build the Pathways project.

00:03:00.876 --> 00:03:04.836
<v SPEAKER_3>The final cost numbers on these two projects are uncertain right now.

00:03:04.836 --> 00:03:13.676
<v SPEAKER_3>Regulatory delays, legal challenges and supply chain issues are just a few of the risks taken on by private players looking to make multi-billion dollar bets on Canada.

00:03:14.636 --> 00:03:22.236
<v SPEAKER_3>Some initial estimates are $60.5 billion for the Pathways project and $20 to $30 billion for a new pipeline.

00:03:22.236 --> 00:03:31.256
<v SPEAKER_3>We should be clear though that this is relatively small compared with the $158.9 billion barrels of proven reserves in the oil sands.

00:03:31.256 --> 00:03:36.996
<v SPEAKER_3>At current oil prices, these reserves is worth an incredible $8.2 trillion.

00:03:38.936 --> 00:03:40.456
<v SPEAKER_2>Yeah, that's a big number isn't it?

00:03:40.656 --> 00:03:50.496
<v SPEAKER_2>It's not really relevant though, Joe, because you're never going to recover all of that oil, even at 10 million barrels a day to do the math, it's a long time, whatever.

00:03:50.496 --> 00:03:53.076
<v SPEAKER_2>That's not the point we're trying to make here today.

00:03:53.076 --> 00:04:00.796
<v SPEAKER_2>It is a giant resource and it belongs to the citizens of Alberta and Canada writ large, and we need to get them exploited as fast as you can.

00:04:00.796 --> 00:04:13.776
<v SPEAKER_2>The more important thing about the number of dollars is the net present value of the reserves, and every day that goes by is a day of lost production, and therefore a day of lost royalties and revenues and corporate taxes, etc.

00:04:15.096 --> 00:04:28.896
<v SPEAKER_2>Remember though that you got to keep in mind that when companies are making their decision, they have a fiduciary

responsibility to their shareholders first, well, to the corporation first, but therein lies the shareholders.

00:04:28.896 --> 00:04:36.976
<v SPEAKER_2>Their decision is between investing in Canada, investing elsewhere, or returning shareholders their money.

00:04:38.196 --> 00:04:47.816
<v SPEAKER_2>Not only are they not responsible for thinking strategically about Canada's economic future, but they are also legally barred from prioritizing it over the company and its shareholders.

00:04:48.996 --> 00:04:56.236
<v SPEAKER_2>My sense is that on the fear over greed spectrum, these companies are still leaning toward fear of the rug being pulled out from under them.

00:04:56.236 --> 00:05:04.536
<v SPEAKER_2>We've just had too many years of ineffective regulatory and environmental policy overreach.

00:05:05.336 --> 00:05:17.796
<v SPEAKER_2>For example, the government of British Columbia, some Indigenous communities, only a few mind you, and the legal engolt community in British Columbia seem to be preparing to resist any proposed pipeline.

00:05:17.796 --> 00:05:30.436
<v SPEAKER_2>BC may be bought off with federal support for another favored project, but in a free society, the federal government has limited options to counteract legal opposition, therefore, its Supreme Court decisions years out.

00:05:30.436 --> 00:05:35.216
<v SPEAKER_2>What will likely be necessary is for Canada to start thinking longer term about the resource.

00:05:36.276 --> 00:05:41.336
<v SPEAKER_2>One of our constant critiques is that we can't seem to think beyond 2050.

00:05:41.336 --> 00:05:51.996
<v SPEAKER_2>The original Canadian mainline, now the Inbridge mainline, was built in 1950, with the extension from Wisconsin to Sarnia being built in 1953.

00:05:53.076 --> 00:05:59.856
<v SPEAKER_2>It's still producing or moving crude oil and products 75 years later.

00:05:59.856 --> 00:06:07.976
<v SPEAKER_2>For resources as large as the oil sands and in addition, the Montney gas formation, our horizons should be more than that.

00:06:07.976 --> 00:06:10.156
<v SPEAKER_2>They should be up towards 2085.

00:06:12.676 --> 00:06:22.716
<v SPEAKER_2>Now, thinking from the perspective of Canada in 2085, do we think that we will regret having supported the diversification of Alberta's energy trade to the Pacific?

00:06:22.716 --> 00:06:32.756
<v SPEAKER_2>I strongly suspect that by then, these debates will be forgotten to everyone except historians and people will generally think of a new pipeline as a natural consequence of the scale of Canada's resources.

00:06:32.756 --> 00:06:35.576
<v SPEAKER_2>It's an interesting time.

00:06:35.636 --> 00:06:38.056
<v SPEAKER_2>We need to really, really...

00:06:38.056 --> 00:06:46.296
<v SPEAKER_2>It's hard not to put your present value, in the present hat on as opposed to long-term strategic thinking.

00:06:46.296 --> 00:06:47.516
<v SPEAKER_2>And Joe, let's...

00:06:47.516 --> 00:06:58.216
<v SPEAKER_2>You know, I know that you've been trying to make the differentiation between interests and the national interest in all of these debates and discussions we've been having the last few days.

00:06:58.216 --> 00:07:03.136
<v SPEAKER_2>These, in my mind, these projects really are in the national interest.

00:07:04.616 --> 00:07:08.476
<v SPEAKER_3>Yeah, and I think something like this is...

00:07:08.596 --> 00:07:29.276
<v SPEAKER_3>And I know that it's a controversial project, but maybe the thing is that the reason why the major projects lists are not quite the nation-building projects that we're talking about is because they're trying to avoid that sort of political controversy that comes with doing something that dramatically shifts the course of Canada's

economic future.

00:07:29.276 --> 00:07:33.416
<v SPEAKER_3>Because shifting the course of Canada's economic future, that's going to be a controversial thing.

00:07:33.416 --> 00:07:35.196
<v SPEAKER_3>There's going to be a lot of debate around it.

00:07:35.196 --> 00:07:40.756
<v SPEAKER_3>But I think that it could be necessary in our current situation.

00:07:40.756 --> 00:07:42.556
<v SPEAKER_2>Well, I don't think it could.

00:07:42.556 --> 00:07:44.756
<v SPEAKER_2>I think it's necessary.

00:07:46.296 --> 00:07:48.756
<v SPEAKER_2>I go back to that present value argument.

00:07:52.136 --> 00:08:06.596
<v SPEAKER_2>Over the past 24 months, say, maybe even only 18, the decarbonization headwinds have forced people to think realistically about the whole suite of energy products that fuel the world and the need for hydrocarbon in that future.

00:08:06.596 --> 00:08:12.856
<v SPEAKER_2>There's still the flag-waving, bleeding hearts that say that, you know, we got to get off carbon.

00:08:12.856 --> 00:08:17.636
<v SPEAKER_2>But it's a lot easier to say it than it is to do it.

00:08:17.636 --> 00:08:19.956
<v SPEAKER_2>Anyways, we could go round and round about this for weeks, Joe.

00:08:19.956 --> 00:08:21.436
<v SPEAKER_2>We'll see what happens on Thursday.

00:08:21.436 --> 00:08:25.276
<v SPEAKER_2>We'll see how much meat is on the bone, so to speak.

00:08:25.976 --> 00:08:44.116
<v SPEAKER_2>I'm concerned still that this is an overtly Machiavellian move by Carney to set the table for dismissal by other parties to the party, but he can then claim he did what he could do, and now it's not my fault.

00:08:44.116 --> 00:08:45.316
<v SPEAKER_2>I still fear that.

00:08:45.316 --> 00:08:56.516
<v SPEAKER_3>Yeah, I mean, we should still be clear that if the Canadian Federal Government wants to get something like an interprovincial pipeline done, it has complete jurisdiction over that.

00:08:56.576 --> 00:08:58.256
<v SPEAKER_2>Ultravirus, yeah, exactly.

00:08:58.256 --> 00:09:03.716
<v SPEAKER_3>Yeah, so they can get this done, and in fact, they also own a pipeline company.

00:09:04.876 --> 00:09:12.876
<v SPEAKER_3>So I'm not saying that it would be easy, but if the Federal Government wants to get it done, it can get it done.

00:09:12.876 --> 00:09:13.676
<v SPEAKER_2>Yeah.

00:09:13.676 --> 00:09:14.096
<v SPEAKER_2>Okay.

00:09:14.096 --> 00:09:15.496
<v SPEAKER_2>What else?

00:09:15.496 --> 00:09:25.036
<v SPEAKER_3>Next up, I want to briefly touch on a Bloomberg article to plug a recent podcast I had with Brenda Schaeffer to talk about African energy access and development.

00:09:25.036 --> 00:09:44.736
<v SPEAKER_3>So a recent Bloomberg Big Take article explored how a lack of energy access in Africa is preventing the continent from following the traditional development pathway from primary resource extraction to secondary manufacturing, a step that's typically associated with the rise of a strong middle class and the associated societal benefits.

00:09:45.216 --> 00:09:48.836
<v SPEAKER_3>So this is the subject of a podcast we put out on October 15th.

00:09:48.836 --> 00:09:55.316
<v SPEAKER_3>So a few weeks before this Big Take article came out, and this podcast featured Brenda Schaeffer.

00:09:55.376 --> 00:09:58.796
<v SPEAKER_3>I really recommend everybody listen to this if you haven't already.

00:09:58.796 --> 00:10:04.116
<v SPEAKER_3>It's titled Africa's Dire Energy Infrastructure Needs.

00:10:04.116 --> 00:10:27.016
<v SPEAKER_3>So instead, sub-Saharan Africa countries are having a difficult time moving past the low productivity small scale primary resources, and this is things like subsistence farming, and artisanal mining, you know, it's called artisanal mining, but it's basically just extremely unsafe mining of resources by individuals with not very modern tools.

00:10:27.156 --> 00:10:28.756
<v SPEAKER_3>Including children, by the way.

00:10:28.756 --> 00:10:29.416
<v SPEAKER_3>Yeah, yeah.

00:10:29.416 --> 00:10:32.376
<v SPEAKER_3>So I'm not a big fan of the way we frame it as artisanal mining.

00:10:32.376 --> 00:10:32.696
<v SPEAKER_2>Yes, exactly.

00:10:32.696 --> 00:10:38.596
<v SPEAKER_3>Very dangerous, very unhealthy, not good for the communities that do it, but they do it out of desperation.

00:10:38.596 --> 00:10:40.476
<v SPEAKER_2>They don't have Workman's Compensation Board there.

00:10:40.476 --> 00:10:42.816
<v SPEAKER_3>No, no, not at all.

00:10:42.816 --> 00:10:44.056
<v SPEAKER_3>And people die there all the time.

00:10:44.616 --> 00:10:47.796
<v SPEAKER_2>I'm being facetious, which is really not very, it's not correct.

00:10:48.476 --> 00:10:49.656
<v SPEAKER_2>It's an awful situation.

00:10:49.656 --> 00:10:50.456
<v SPEAKER_3>Yeah, yeah.

00:10:50.456 --> 00:10:55.696
<v SPEAKER_3>No, and it's something that we should be looking to try to try to make sure that doesn't have to happen.

00:10:55.696 --> 00:10:57.736
<v SPEAKER_3>And that's what we're talking about here.

00:10:57.736 --> 00:11:10.156
<v SPEAKER_3>So manufactured goods in Africa, which normally at this stage of development, countries would be moving into manufacturing their own goods, but these goods are instead largely imported from China and Europe.

00:11:10.156 --> 00:11:12.896
<v SPEAKER_3>So what stopped me in my tracks was an anecdote from Nigeria.

00:11:13.336 --> 00:11:22.516
<v SPEAKER_3>Now, according to Bloomberg, 86% of Nigerian businesses rely on gasoline and diesel generators to manage grid blackouts.

00:11:22.516 --> 00:11:25.996
<v SPEAKER_3>So these blackouts average 12 hours daily.

00:11:25.996 --> 00:11:28.256
<v SPEAKER_3>Natural gas generators and solar systems.

00:11:28.256 --> 00:11:32.156
<v SPEAKER_3>So these would be off-grid natural gas generators and solar systems.

00:11:32.156 --> 00:11:36.636
<v SPEAKER_3>These are cheaper on a megawatt hour basis, but the upfront cost is too high for small businesses.

00:11:36.636 --> 00:11:44.856
<v SPEAKER_3>So they just end up buying these diesel-fired generators, and it's just remarkably expensive for them to do so.

00:11:44.856 --> 00:11:46.216
<v SPEAKER_2>Yeah, and it's at the margin.

00:11:46.216 --> 00:11:47.736
<v SPEAKER_2>Like, it's the worst-case scenario.

00:11:47.736 --> 00:11:54.676
<v SPEAKER_2>They have to buy fuel on a just-now basis, so they pay it through the nose.

00:11:54.676 --> 00:11:55.416
<v SPEAKER_3>Yeah.

00:11:55.416 --> 00:12:06.436
<v SPEAKER_2>A World Bank project focused on increasing Nigeria's electricity access, estimated economic losses from unreliable electrical supply of 5 to 7% of GDP.

00:12:06.436 --> 00:12:07.556
<v SPEAKER_2>Think about that, folks.

00:12:07.556 --> 00:12:08.896
<v SPEAKER_2>5 to 7% of GDP.

00:12:08.896 --> 00:12:10.276
<v SPEAKER_3>And that's annual, so it compounds.

00:12:10.376 --> 00:12:11.456
<v SPEAKER_2>Yes, yes.

00:12:11.456 --> 00:12:22.156
<v SPEAKER_2>The company has just 5.4 gigawatts of available generating capacity, half of Alberta, for a population of, get this, 240 million people.

00:12:22.156 --> 00:12:25.996
<v SPEAKER_2>And they don't have to worry about winter, but it gets hot there.

00:12:25.996 --> 00:12:28.016
<v SPEAKER_3>They could sure use AC.

00:12:28.016 --> 00:12:29.476
<v SPEAKER_2>Yeah.

00:12:29.476 --> 00:12:32.196
<v SPEAKER_2>The question, that is, how to get the continent on track?

00:12:32.196 --> 00:12:44.816
<v SPEAKER_2>We should remember that the first electrical grids built in the United States were when US inflation adjusted GDP per capita was just $4,500 to $6,000 per person, and were built without the use of development finance.

00:12:44.816 --> 00:12:48.096
<v SPEAKER_2>However, these grids were mainly focused on cities.

00:12:48.096 --> 00:12:59.056
<v SPEAKER_2>Rural electrification was only completed in the US in the 50s, when inflation adjusted GDP per capita was more like $14,000 or

$15,000 per person.

00:12:59.056 --> 00:13:03.276
<v SPEAKER_2>Perhaps the issue is that African countries are trying to run before they can walk.

00:13:03.396 --> 00:13:08.476
<v SPEAKER_2>It's so much easier and more cost-effective to electrify industry first.

00:13:08.476 --> 00:13:17.476
<v SPEAKER_2>Electrifying households will always require huge government subsidies because households are too poor to pay for the needed infrastructure, especially in rural areas.

00:13:17.476 --> 00:13:21.776
<v SPEAKER_2>And even more so, Joe, and especially in third-world developing countries.

00:13:22.496 --> 00:13:23.736
<v SPEAKER_2>They just don't have the...

00:13:23.736 --> 00:13:24.236
<v SPEAKER_3>Yeah.

00:13:24.236 --> 00:13:24.556
<v SPEAKER_3>Yeah.

00:13:26.376 --> 00:13:33.516
<v SPEAKER_3>I believe Nigeria's GDP per capita is around, I want to say 3,500 to 4,000 US dollars per person.

00:13:33.516 --> 00:13:36.896
<v SPEAKER_3>So those numbers before were inflation adjusted.

00:13:36.896 --> 00:13:41.236
<v SPEAKER_3>So they're a little bit poorer now than the US was in 1880.

00:13:41.236 --> 00:13:42.636
<v SPEAKER_2>In 1920.

00:13:42.636 --> 00:13:42.876
<v SPEAKER_2>Yeah.

00:13:42.876 --> 00:13:45.136
<v SPEAKER_3>Way poorer than it was in 1920.

00:13:45.136 --> 00:13:51.116
<v SPEAKER_3>So it's like as you develop, like in my view, it's like

industry should get that power first.

00:13:51.296 --> 00:13:51.976
<v SPEAKER_3>That's most important.

00:13:52.696 --> 00:13:54.036
<v SPEAKER_3>Get that right away.

00:13:54.036 --> 00:13:55.176
<v SPEAKER_3>Get that set up.

00:13:55.296 --> 00:13:59.156
<v SPEAKER_2>Well, that gets jobs into the people that need the power.

00:13:59.156 --> 00:14:00.656
<v SPEAKER_3>Development of the middle class.

00:14:00.656 --> 00:14:06.076
<v SPEAKER_3>Then once you have that burgeoning middle class, then you can electrify households.

00:14:06.076 --> 00:14:19.836
<v SPEAKER_3>But I hate to say it, maybe the problem is that democracy makes it so that these countries have to provide power to people first before they can provide to the industry, and then that gets a cart before the horse.

00:14:21.096 --> 00:14:22.056
<v SPEAKER_2>What else, Joe?

00:14:22.056 --> 00:14:23.456
<v SPEAKER_3>Yeah.

00:14:23.456 --> 00:14:28.876
<v SPEAKER_3>As a last piece of news, let's talk about the situation in Venezuela.

00:14:28.876 --> 00:14:45.076
<v SPEAKER_3>So on Thursday, the Trump administration designated the, and I'm going to butcher this, Cartel de los Soles as a foreign terrorist organization, and also named the Venezuelan government as a state sponsor of this group.

00:14:45.076 --> 00:14:57.876
<v SPEAKER_3>Basically, they're saying that this cartel is made up of high level military officers, from Venezuela, and they basically control drug trafficking through the country and then through the wider region.

00:14:57.876 --> 00:15:04.556

<v SPEAKER_3>So this raises major questions about the ability of Western energy companies to continue operating in Venezuela.

00:15:04.556 --> 00:15:10.916
<v SPEAKER_3>So thorny legal issues are raised for companies which do business with the Venezuelan government under these situations.

00:15:10.916 --> 00:15:16.136
<v SPEAKER_3>And this is even for the countries which have an exemption from the existing US sanctions on the country.

00:15:17.116 --> 00:15:32.376
<v SPEAKER_3>So it's disputed whether this cartel of the sons is controlled by the Venezuelan government, but the designation could be waived for the administration to drum up domestic legitimacy for possible intervention militarily in the country.

00:15:32.376 --> 00:15:42.256
<v SPEAKER_3>Either way, energy companies operating in Venezuela are facing a level of uncertainty that, you know, I'm thankful to say it's a level above the one facing companies in Canada.

00:15:43.716 --> 00:15:53.916
<v SPEAKER_2>Yeah, the biggest similarity between Canada and Venezuela is the large deposits of both conventional and bitumen oil reserves.

00:15:53.916 --> 00:15:59.636
<v SPEAKER_2>According to the Energy Institute, Venezuela has around 300 billion barrels of oil as of 2020.

00:15:59.956 --> 00:16:05.876
<v SPEAKER_2>If you just remember, 10 minutes ago, Joe and I talked about Canada have 160 billion barrels.

00:16:05.876 --> 00:16:15.136
<v SPEAKER_2>In early October, Reuters reported that Venezuela exported around a million barrels per day of crude oil for the first time since February 2020.

00:16:15.136 --> 00:16:22.916
<v SPEAKER_2>The vast majority of these exports are directed toward China, though Chevron sends about 100,000 barrels per day to the United States.

00:16:22.916 --> 00:16:30.896
<v SPEAKER_2>With current low prices, the Trump administration may be more confident to act aggressively towards Venezuela in pursuit of regime change.

00:16:30.896 --> 00:16:36.936

<v SPEAKER_2>US Secretary of State Marco Rubio has long been a hawk on toppling the Venezuelan regime.

00:16:36.936 --> 00:16:44.636
<v SPEAKER_2>However, military moves to accelerate regime change might create a wedge between the United States and its other partners in Latin America.

00:16:44.636 --> 00:16:55.416
<v SPEAKER_2>The US has not conducted a military intervention in the region since it toppled Manuel Noriega's government in Panama 36 years ago.

00:16:56.936 --> 00:17:01.436
<v SPEAKER_2>So I don't know, Joe, you and I have had various discussions about Venezuela.

00:17:02.196 --> 00:17:04.896
<v SPEAKER_2>I'm kind of a glass half empty guy with Venezuela.

00:17:04.896 --> 00:17:26.176
<v SPEAKER_2>I fear that Trump's bigger real politic move is to, it could be to get more Venezuelan reserves to give the US refiners in the Gulf Coast more optionality on crude, which would be really detrimental to Canadian oil ship to that part of the world.

00:17:26.216 --> 00:17:39.836
<v SPEAKER_2>And I, you know, other commentators have said to me that I'm chicken little and the sky is falling, but I don't trust anything that, or I don't believe that any option is off the table for the Trump administration.

00:17:39.836 --> 00:17:50.776
<v SPEAKER_3>Yeah, we should remember that the originally, those refineries in the US Gulf Coast that handle heavy sour crude oil, they were meant to be supplied by Venezuelan crude.

00:17:50.776 --> 00:17:55.536
<v SPEAKER_3>And this is before Hugo Chavez came in and kind of ruined the whole plan.

00:17:56.056 --> 00:18:05.816
<v SPEAKER_3>But, yeah, if Venezuela is returned to production, I think that they have some fantastic reserves down there.

00:18:05.816 --> 00:18:09.536
<v SPEAKER_3>And it could be a major issue for Canada.

00:18:09.536 --> 00:18:12.016
<v SPEAKER_2>Keystone.

00:18:12.016 --> 00:18:13.776
<v SPEAKER_2>Okay, Joe, that's great.

00:18:13.776 --> 00:18:15.756
<v SPEAKER_2>Thanks for bringing out those stories for us today.

00:18:15.756 --> 00:18:17.276
<v SPEAKER_2>I just enjoy doing this with you, Joe.

00:18:17.576 --> 00:18:18.376
<v SPEAKER_2>It's a lot of fun.

00:18:18.636 --> 00:18:26.136
<v SPEAKER_2>I'm really, and I hope we bring some information to the folks that they may or may not have known of.

00:18:26.136 --> 00:18:27.436
<v SPEAKER_2>So thanks for doing this.

00:18:27.436 --> 00:18:29.156
<v SPEAKER_3>Yeah, absolutely not a problem, Kelly.

00:18:29.156 --> 00:18:38.336
<v SPEAKER_3>And to our listeners, stay tuned for further news on our events and future papers and research on these issues.

00:18:38.336 --> 00:18:44.196
<v SPEAKER_3>So happy to have everybody, all of our listeners, interested in these subjects.

00:18:44.196 --> 00:18:45.096
<v SPEAKER_2>Great.

00:18:45.096 --> 00:18:52.856
<v SPEAKER_2>Let's go talk about Pacific Coast Oil Transport Bill C-48 with one of the great experts of this and with Andrew Rae.

00:18:55.816 --> 00:19:00.936
<v SPEAKER_2>For today's podcast, we're featuring a discussion about the oil tanker moratorium.

00:19:00.936 --> 00:19:03.856
<v SPEAKER_2>With us today is Andrew Rae.

00:19:03.856 --> 00:19:13.416
<v SPEAKER_3>Andrew is a former harbour pilot with 35 years of experience, including 22 years as Vice President of the Atlantic Region at the Canadian Marine Piles Association.

00:19:13.416 --> 00:19:24.216
<v SPEAKER_3>He's a fantastic expert on everything to do with marine ports, and all of the ins and outs of making these sorts of important pieces of Canadian infrastructure work.

00:19:24.216 --> 00:19:26.236
<v SPEAKER_3>So thanks for coming on, Andrew.

00:19:26.236 --> 00:19:28.736
<v SPEAKER_1>It's my pleasure to be with you.

00:19:28.736 --> 00:19:30.016
<v SPEAKER_2>Yeah, it's great to see you again, Andrew.

00:19:30.136 --> 00:19:41.216
<v SPEAKER_2>We've had Andrew on the podcast before, folks may remember, and he brings a very fulsome view and a lot of experience to the conversation.

00:19:41.216 --> 00:19:56.996
<v SPEAKER_2>Today we want to talk mostly about the Oil Moratorium Act and all of the things that it can affect and or cause not to happen in many regards.

00:19:58.496 --> 00:20:03.236
<v SPEAKER_2>Andrew, could we start with a little bit of a discussion about what the Oil Tank Moratorium Act does?

00:20:03.856 --> 00:20:07.756
<v SPEAKER_2>Or Oil Tank Moratorium Act does?

00:20:07.756 --> 00:20:14.616
<v SPEAKER_1>So the Oil Tanker Moratorium Act received royal assent in June of 2019.

00:20:15.996 --> 00:20:29.336
<v SPEAKER_1>And it was designed to ban tankers carrying a certain cargo in a certain quantity in the northern waters of the British Columbia coast.

00:20:29.676 --> 00:20:51.396
<v SPEAKER_1>So from the north tip of Vancouver Island, covering the waters around Haida Gwaii and over to the Alaska, British Columbia border, tankers that were carrying a persistent or a crude oil greater than 12,500 tons.

00:20:51.396 --> 00:21:09.396
<v SPEAKER_1>Under normal circumstances could not enter those waters, but there are exceptions within the act that would allow the minister to grant permission for those vessels to enter the waters described

under the tanker moratory.

00:21:09.636 --> 00:21:10.996
<v SPEAKER_1>Mm-hmm.

00:21:10.996 --> 00:21:16.036
<v SPEAKER_3>Yeah, so this exemption, I think we'll talk a little bit about it in a moment here.

00:21:16.996 --> 00:21:27.136
<v SPEAKER_3>But Andrew, you noticed a certain part of the act, a certain clause that has been mostly unremarked on by the media and by politicians.

00:21:27.836 --> 00:21:35.256
<v SPEAKER_3>And this clause could result in a broad shift in the way that this act works.

00:21:35.256 --> 00:21:39.756
<v SPEAKER_3>So could you unpack for us what this clause is and what you think it could do?

00:21:39.756 --> 00:21:48.676
<v SPEAKER_1>Well, section 36 of the act requires that the act be reviewed after five years of Royal Assent, from Royal Assent.

00:21:49.996 --> 00:21:54.716
<v SPEAKER_1>So that would mean from June 2019 to June 2024.

00:21:55.016 --> 00:22:05.716
<v SPEAKER_1>So we're now in a season where the act can be reviewed to see if amendments are required, what sections of the act are still relevant.

00:22:05.716 --> 00:22:25.996
<v SPEAKER_1>And that can be undertaken by a committee of the Senate or committee of the House of Commons, or they could decide to strike a joint committee, include public hearings and written briefs to the committee for future consideration on the act.

00:22:25.996 --> 00:22:27.756
<v SPEAKER_1>Yeah, fantastic.

00:22:27.756 --> 00:22:41.196
<v SPEAKER_2>So that sounds to that with little foreboding here, that sounds to me like all of the narrative and the bluster by the most specifically the Premier of British Columbia.

00:22:41.196 --> 00:22:46.896
<v SPEAKER_2>It could be at least discussed inside this without

repealing the act.

00:22:46.896 --> 00:22:54.816
<v SPEAKER_2>Changes could be made that could effectively allow tanker, well, there's tanker traffic now and we're going to get to that.

00:22:57.636 --> 00:22:59.216
<v SPEAKER_2>Relative to a new pipeline.

00:22:59.216 --> 00:23:00.496
<v SPEAKER_2>Is that right?

00:23:02.576 --> 00:23:06.636
<v SPEAKER_1>It could be and certainly could be interpreted that way.

00:23:06.636 --> 00:23:13.896
<v SPEAKER_1>And that's not uncommon for various acts that fall under the Minister of Transport.

00:23:14.116 --> 00:23:28.836
<v SPEAKER_1>For example, when the Canada Shipping Act of 2001 was reviewed around 2023 onwards, there was a major rewrite of the Canada Shipping Act in 1998.

00:23:30.296 --> 00:23:41.036
<v SPEAKER_1>And then there was public consultations, a full review done of the act to see, you know, which portions are still relevant, which are effective.

00:23:42.136 --> 00:23:57.976
<v SPEAKER_1>Again, when the the Pilotage Act was rewritten in 2019, it was put in the act that the minister was to conduct a thorough review, 10 years from Royal Assent.

00:23:57.976 --> 00:24:01.656
<v SPEAKER_1>So these are standard protocols that are put in legislation.

00:24:03.216 --> 00:24:06.076
<v SPEAKER_1>And we're still waiting for a call for the review.

00:24:06.216 --> 00:24:26.256
<v SPEAKER_1>I think the review would be very helpful to put very constructive, very reasoned approaches forward and lessons that we've learned over the last decade, and particularly lessons that we've picked up from the expansion of the Trans Mountain Pipeline.

00:24:26.256 --> 00:24:39.256
<v SPEAKER_1>You've had over 400 Afromax tankers departing the Port of

Vancouver, moving Canadian crude to the US and Asian markets.

00:24:39.256 --> 00:24:44.656
<v SPEAKER_2>Andrew, let's just stick with that for a second because I'm going to go back to a discussion we had.

00:24:44.656 --> 00:24:52.236
<v SPEAKER_2>I don't know if it was on the pod, but it was certainly at a roundtable that we had with you, which was hugely informative with maps.

00:24:54.376 --> 00:25:16.676
<v SPEAKER_2>Andrew, quickly give us three minutes of the protocol of how those Afromax tankers are when they reach a certain point, west and south of Vancouver Island, where pilotage kicks in and the mechanics of that large ship coming into the Narrows and into the Fraser.

00:25:16.676 --> 00:25:23.776
<v SPEAKER_2>Just go through that quickly for us because I think it gives, it sets the tone for how any tanker would be managed.

00:25:23.776 --> 00:25:33.076
<v SPEAKER_2>And is being managed, I'm sure, with LNG Canada with some variation now in the out-of-kit-a-mat.

00:25:33.076 --> 00:26:01.996
<v SPEAKER_1>Yeah, so prior to any expansion of an operation, a term poll is conducted, which is a voluntary study administered by Transport Canada and the proponents for a project would look at all the navigation safety requirements, all the national, or excuse me, natural hazards en route that need to be managed and mitigated.

00:26:01.996 --> 00:26:12.716
<v SPEAKER_1>And this is compiled in this report is presented and it is then put into action.

00:26:12.716 --> 00:26:25.636
<v SPEAKER_1>So in the case of the Trans Mountain Terminal, laden tankers departing the terminal are required to have two pilots on board.

00:26:25.636 --> 00:26:34.076
<v SPEAKER_1>And they're fully escorted from the terminal past the pilot boarding station, which is just south of Victoria.

00:26:35.216 --> 00:26:42.476
<v SPEAKER_1>There are sections where the maneuver in the channel is restrictive, so the tugs are tethered.

00:26:43.196 --> 00:26:50.236
<v SPEAKER_1>So, the pilots interact with the tug masters in a tethered tug situation.

00:26:50.236 --> 00:27:07.596
<v SPEAKER_1>Should the vessel have a steering casualty or a loss of propulsion, the tugs are there to, under the pilot's control, to continue to steer the vessel until it can be brought to safe, total safety.

00:27:07.596 --> 00:27:23.196
<v SPEAKER_1>So, a lot of this, for example, was done during the Northern Gateway Pipeline Project, where under, they ran 170 simulations with pilots and tug masters with different redundancies.

00:27:23.196 --> 00:27:45.016
<v SPEAKER_1>And in every scenario, that effective combination of a proper escort tug under the control of the pilot brought the ship to a safe stop and under control at all times and mitigated any grounding or collision scenarios.

00:27:45.016 --> 00:27:49.936
<v SPEAKER_1>So that's been fully implemented by notices of industry.

00:27:49.936 --> 00:27:52.856
<v SPEAKER_1>It's a requirement of the terminal.

00:27:53.696 --> 00:27:57.656
<v SPEAKER_1>It's a statutory requirement under pilotage legislation.

00:28:00.416 --> 00:28:15.956
<v SPEAKER_1>The pilots and the pilotage authority themselves have purchased their own simulators, so they're constantly rerunning these scenarios, making sure that the mitigation measures are relative and tweaking where necessary.

00:28:15.956 --> 00:28:19.436
<v SPEAKER_1>So it's been a very effective procedure.

00:28:20.796 --> 00:28:27.156
<v SPEAKER_1>And as I said, it goes a long way to granting social license for these projects.

00:28:27.156 --> 00:28:28.396
<v SPEAKER_3>Yeah, absolutely.

00:28:28.396 --> 00:28:38.836
<v SPEAKER_3>And on that social license piece, I think the things that loom large in people's minds are the big spills like the Exxon Valdez.

00:28:38.836 --> 00:28:41.736
<v SPEAKER_3>And these really loom large in people's minds.

00:28:42.136 --> 00:28:47.436
<v SPEAKER_3>They think about these when they think about oil tankers going through a region like Northwest BC.

00:28:49.076 --> 00:28:57.796
<v SPEAKER_3>And I think that you've made some good points before in our conversations that quite a bit has changed since this type of spill.

00:28:57.796 --> 00:29:02.656
<v SPEAKER_3>And the risks might not be the same as they were in previous decades.

00:29:02.656 --> 00:29:05.656
<v SPEAKER_3>So could you unpack for us a little bit, Andrew?

00:29:06.056 --> 00:29:12.656
<v SPEAKER_3>What really has changed since the Exxon Valdez or other big oil spills?

00:29:15.276 --> 00:29:23.376
<v SPEAKER_1>There was a number of significant changes and it impacted not only in the state of Alaska, but internationally.

00:29:25.036 --> 00:29:39.876
<v SPEAKER_1>One of the most immediate changes at the time of the Exxon Valdez spill, pilotage through Prince William Sound to the open Pacific was not mandated for US flagship.

00:29:40.996 --> 00:29:50.156
<v SPEAKER_1>Now, all tankers transiting that area have state of Alaska licensed pilots on board.

00:29:50.156 --> 00:29:53.996
<v SPEAKER_1>There was no escort tug requirement at that time.

00:29:53.996 --> 00:30:01.596
<v SPEAKER_1>Now escort tug requirements are mandatory till the vessel again reaches the open reaches of the Pacific.

00:30:03.036 --> 00:30:04.676
<v SPEAKER_1>Tankers were single hull.

00:30:07.056 --> 00:30:20.496
<v SPEAKER_1>Now, a tanker that's over 5,000 tons is required to be double hull, and that requirement kicked in for new tankers that were...

00:30:20.496 --> 00:30:26.176
<v SPEAKER_1>The keel was laid by July of 1994.

00:30:26.176 --> 00:30:29.396
<v SPEAKER_1>So, from then on, all new tanker construction was double hull.

00:30:30.436 --> 00:30:39.736
<v SPEAKER_1>And by January 1 of 2010, all existing single hull tankers were phased out of the global market totally.

00:30:39.736 --> 00:30:44.036
<v SPEAKER_1>So, now you have the double hull requirements.

00:30:44.036 --> 00:30:55.796
<v SPEAKER_1>So, for vessels, for example, trading from the TMX terminal, the spacing between the inner and outer hull is in the range of two to two and a half meters.

00:30:55.796 --> 00:31:00.336
<v SPEAKER_1>So, that's at the side and also at the bottom of the vessel.

00:31:01.776 --> 00:31:03.716
<v SPEAKER_1>So, that's a significant.

00:31:03.716 --> 00:31:14.816
<v SPEAKER_1>There's been some upgrades to standards for ship-borne radar and also shore-based radar surveillance was brought about.

00:31:14.816 --> 00:31:24.676
<v SPEAKER_1>And fatigue awareness and enhanced training for vessels' crews were all brought in.

00:31:24.676 --> 00:31:31.456
<v SPEAKER_1>And this, though, in the US, it was brought in under OPIN 90 internationally.

00:31:31.456 --> 00:31:43.036
<v SPEAKER_1>It came in under MARPOL, which is the Marine Pollution Prevention Convention, which is in effect now.

00:31:43.036 --> 00:31:57.196
<v SPEAKER_1>So sort of a global regulation, which a signatory country like Canada would take the rules under that convention and apply it to its regulations under the Canada Shipping Act.

00:31:59.036 --> 00:32:08.536
<v SPEAKER_2>Let's just stay there for a minute, Andrew, because what

just kind of popped in my mind, and I know it's a little bit off script, but I'm sure you'll have an opinion, even though you're retired now.

00:32:08.536 --> 00:32:30.556
<v SPEAKER_2>You know, when we look at the build out of the economy writ large and the requirement for certain trades and the retirement of boomers like me, what's the capacity of people coming into the skill set of being pilots?

00:32:33.116 --> 00:32:38.596
<v SPEAKER_2>How are we looking for, you know, there's a lot more pilotage required here.

00:32:38.596 --> 00:32:42.076
<v SPEAKER_2>Shipping is a giant part of the global economy.

00:32:42.176 --> 00:32:48.796
<v SPEAKER_2>And I kind of worry about, you know, do we have, are we continuing to add qualified pilots?

00:32:48.796 --> 00:32:51.196
<v SPEAKER_2>And is there an abundance or is there a shortage?

00:32:51.196 --> 00:32:54.156
<v SPEAKER_2>Is there, you know, where are we with that?

00:32:55.996 --> 00:32:58.496
<v SPEAKER_1>It is a concern internationally.

00:32:58.496 --> 00:33:02.836
<v SPEAKER_1>The International Maritime Pilots Association are looking at that.

00:33:02.836 --> 00:33:17.336
<v SPEAKER_1>Certain of the European countries and Australia have looked at that, where you get your pool of qualified mariners, typically in pilotage in the Atlantic region for certain.

00:33:17.336 --> 00:33:22.516
<v SPEAKER_1>We recruit from ships captains, people with command experience.

00:33:23.736 --> 00:33:28.696
<v SPEAKER_1>Right now, we seem to be able to fulfill the requirements.

00:33:28.696 --> 00:33:37.036
<v SPEAKER_1>There's still a good pool of people interested in pursuing that avenue of a maritime career.

00:33:39.416 --> 00:34:02.436
<v SPEAKER_1>But in the future, they're looking at different models, specific, we used to refer to years ago as sandwich training, so much time in university, so much practical time at sea to be exposed and learn the skill sets needed.

00:34:02.436 --> 00:34:25.216
<v SPEAKER_1>When a candidate enters pilotage now, from a ship's master's background, especially on the Pacific Coast, where the entire British Columbia Coast is compulsory for pilotage, from an apprentice pilot to a fully Class A pilot, which means you would be handling these larger tankers or larger LNG carriers.

00:34:25.216 --> 00:34:29.276
<v SPEAKER_1>They do a seven-year apprenticeship, very, very thorough.

00:34:29.356 --> 00:34:38.156
<v SPEAKER_1>There's a lot of in-house training, a lot of mentoring, and a lot of specific training that's done offshore.

00:34:42.236 --> 00:34:45.336
<v SPEAKER_1>It's a very interesting, very dynamic career.

00:34:45.336 --> 00:34:48.096
<v SPEAKER_1>I thoroughly enjoyed my 35 years of doing it.

00:34:48.096 --> 00:34:58.976
<v SPEAKER_1>You're always learning new things, which is essential given the levels of safety that are required for this to be conducted in a safe and efficient manner.

00:35:01.336 --> 00:35:02.796
<v SPEAKER_2>Yeah, it's interesting.

00:35:03.596 --> 00:35:04.816
<v SPEAKER_2>It's intriguing.

00:35:07.976 --> 00:35:20.596
<v SPEAKER_2>Given to be a mariner, if you're in that space in your head, this would be to me a wonderful way to the middle of to the larger, longer part of your wisdom fulfilled career.

00:35:20.596 --> 00:35:38.856
<v SPEAKER_2>On the same tact, Andrew, again, a little bit off script, but I've got to think that new developments in satellite technology, GPS, the ability to pinpoint positioning instantaneously has got to have helped pilotage a lot.

00:35:38.856 --> 00:35:45.516

<v SPEAKER_2>Like I, you know, I'm thinking of times when you're weathered in, but you're still moving that cargo.

00:35:45.516 --> 00:35:46.736
<v SPEAKER_2>You don't just come to a halt.

00:35:46.736 --> 00:35:49.836
<v SPEAKER_2>You've got technology helps continue to move the ship.

00:35:49.836 --> 00:35:50.736
<v SPEAKER_2>Would that not be correct?

00:35:52.196 --> 00:35:59.556
<v SPEAKER_1>What the pilots do now, to bring a layer of redundancy, they bring their own system on board.

00:36:02.056 --> 00:36:16.436
<v SPEAKER_1>So we have what we refer to as a portable pilotage unit, which has all the latest digital nautical information of your area.

00:36:18.516 --> 00:36:23.416
<v SPEAKER_1>And you set that up independent of the ship's navigation system.

00:36:23.416 --> 00:36:36.136
<v SPEAKER_1>So you're trying to create only a little bit of redundancy, but also error trap any inherent inaccuracies that could be in the ship system.

00:36:37.156 --> 00:36:49.416
<v SPEAKER_1>But you're relying also on the ship's navigation equipment, very particularly in radar for all transits but in low visibility transits.

00:36:49.416 --> 00:36:56.116
<v SPEAKER_1>You have the ability to validate that with your own carrier board system.

00:36:56.116 --> 00:37:03.196
<v SPEAKER_1>But you still have to rely on your traditional knowledge of the waterway.

00:37:03.196 --> 00:37:10.096
<v SPEAKER_1>Because as we know, the global positioning system can be vulnerable to jamming and spoofing.

00:37:12.336 --> 00:37:18.836
<v SPEAKER_1>So build on your skill sets, but you have to have a standard skill set.

00:37:18.836 --> 00:37:24.176
<v SPEAKER_1>Based on your knowledge of the waterway, what we refer to is often natural transits.

00:37:24.176 --> 00:37:35.976
<v SPEAKER_1>Because you could have a blackout situation on board ship where you lose a certain portion of the ship's navigational kit.

00:37:37.716 --> 00:37:47.676
<v SPEAKER_1>So you've got your own as backup, but you also have all the traditional knowledge and learn skills that you've built on under years and years of being mentored.

00:37:47.676 --> 00:37:48.976
<v SPEAKER_2>Right.

00:37:48.976 --> 00:37:59.376
<v SPEAKER_2>Before we move on to what policies could be affected and what could happen here as the pot continues to boil on this issue as it's going to.

00:37:59.376 --> 00:38:12.916
<v SPEAKER_2>Andrew, are the requirements for the LNG carriers that leave Kitimat as far as pilotage and tug control, are they the same as the TMX pipeline?

00:38:12.916 --> 00:38:15.616
<v SPEAKER_1>Very similar, very similar.

00:38:16.676 --> 00:38:26.316
<v SPEAKER_1>You are required to have tethered escort tug from the pilot station inbound and from the terminal all the way out.

00:38:26.316 --> 00:38:42.076
<v SPEAKER_1>In the case of the Kitimat terminal where you're under 120 miles of escort, which is probably the longest escorted pilotage in the world, you carry three pilots for that duration.

00:38:42.076 --> 00:38:45.536
<v SPEAKER_1>Fatigue management is always a consideration.

00:38:48.536 --> 00:38:57.896
<v SPEAKER_1>Where it's a little shorter from the TMX terminal to C, they require two pilots, but for the Kitimat run, it's up to three pilots.

00:38:58.516 --> 00:39:09.816
<v SPEAKER_1>Tug requirements, the tugs for the Kitimat route are a little heavier in that they have a greater bollard pole, up to 100 tons bollard pole.

00:39:09.816 --> 00:39:10.436
<v SPEAKER_1>Where you're dealing with-

00:39:10.436 --> 00:39:12.316
<v SPEAKER_2>What does that mean, Andrew?

00:39:12.316 --> 00:39:22.296
<v SPEAKER_1>That means that the tug can generate 100 tons of force on the ship through its tow line.

00:39:24.036 --> 00:39:37.216
<v SPEAKER_1>So, if you need to steer the ship with the tug, and this is a requirement of tankers, you have to have a strong point aft, that's at least 200 tons safe working.

00:39:38.336 --> 00:39:54.776
<v SPEAKER_1>The tugs are designed, we call it paravening, but tugs are designed with a large skeg that protrudes below the area of the tow inch to the wheelhouse of the tug.

00:39:54.776 --> 00:40:16.816
<v SPEAKER_1>And that, if you order your tug to go around one quarter or the other quarter, so if you're viewing the ship from the stern, the tug will then maneuver to the port side or the starboard side of the ship and create a turning torque that you can actually steer the ship, the tug doing that.

00:40:16.816 --> 00:40:31.256
<v SPEAKER_1>Or then you can use the tug in what we called a transverse arrest mode, where it can actually use its own thrust to create a drag to stop the ship.

00:40:32.636 --> 00:40:36.036
<v SPEAKER_2>You know, it just, sorry, Joe, one just quick point.

00:40:36.036 --> 00:40:43.376
<v SPEAKER_2>You know, the redundancy that's implemented seems to me to be pretty rigorous.

00:40:43.516 --> 00:40:56.276
<v SPEAKER_2>I just, you know, this is, we've been doing this for 150 years and it seems to me that, I don't know how you could move a cargo on water safer than this.

00:40:56.716 --> 00:40:58.516
<v SPEAKER_2>I just, it's, it's, yeah.

00:40:58.516 --> 00:41:05.936
<v SPEAKER_1>Well, you know, a lot of this came about post-Axon Valdez

and, you know, Canada is very fortunate.

00:41:06.416 --> 00:41:19.876
<v SPEAKER_1>We do have a dedicated naval architecture firm in Vancouver who have designed over 150 escort tugs for terminals around the world.

00:41:19.876 --> 00:41:29.616
<v SPEAKER_1>And, you know, the capability of escort towing has improved immensely over the, even the last decade.

00:41:29.616 --> 00:41:32.976
<v SPEAKER_1>And so now tugs are purpose-built for this.

00:41:32.976 --> 00:41:36.496
<v SPEAKER_1>They're given a notation by their classification society.

00:41:36.496 --> 00:41:42.696
<v SPEAKER_1>So classification societies set the construction rules for the tugs.

00:41:42.696 --> 00:41:48.216
<v SPEAKER_1>And a lot of work has been done to enhance their capabilities.

00:41:48.216 --> 00:41:51.696
<v SPEAKER_1>Things like to prevent shock loading on the tow line.

00:41:52.476 --> 00:42:02.976
<v SPEAKER_1>And, you know, even my time when we were starting in the late 80s, early 90s to work with Escort Towing, it's come a long way.

00:42:02.976 --> 00:42:04.996
<v SPEAKER_1>It really has come a long way.

00:42:04.996 --> 00:42:26.836
<v SPEAKER_1>And the state of simulators that you can review these practices and procedures and do drills on have been proved immensely with, you know, the reality that they provide and plus the data that comes out of these simulations for assessment.

00:42:26.836 --> 00:42:36.396
<v SPEAKER_1>So it's really been a step up to address what can we do to make this as safe as possible.

00:42:36.396 --> 00:42:57.696
<v SPEAKER_1>And I think, as you mentioned earlier, the example of the Trans Mountain Expansion and all the protocols in place are probably some of the strictest in Canada for sure, given, you know, the distances that escorting is done over.

00:42:57.756 --> 00:43:04.316
<v SPEAKER_1>And the Atlantic, we're right on the doorstep of the North Atlantic, so we're all close.

00:43:06.216 --> 00:43:26.076
<v SPEAKER_1>And it's transferred, like we in the Port of Halifax use escort towing to safely maneuver large container ships through the Halifax Narrows, because you're going through an area with two suspension bridges and the Naval Dockyard for the East Coast of Canada.

00:43:26.276 --> 00:43:35.016
<v SPEAKER_1>So you want to make sure that if there's any redundancy on board ship and power and steering, you can mitigate that immediately.

00:43:35.016 --> 00:43:36.596
<v SPEAKER_3>Yeah, that's wonderful.

00:43:36.596 --> 00:43:46.736
<v SPEAKER_3>Yeah, and I'm not aware of any sort of incident that has occurred out of the old AffraMax tankers that are going out of the Westridge Marine Terminal for the Trans Mountain Pipeline.

00:43:46.736 --> 00:43:51.156
<v SPEAKER_3>So I think that we can say that that's a success so far, for sure.

00:43:52.016 --> 00:44:11.556
<v SPEAKER_3>And so, Andrew, decision makers in Ottawa are right now weeing, and this is in discussion with the government of Alberta, about a kind of talking about the Alberta's oil and gas industry, especially on the oil side, and the outlook for increasing production.

00:44:11.556 --> 00:44:18.556
<v SPEAKER_3>Alberta requires a new egress, probably a new pipeline or big expansions of current pipelines.

00:44:20.516 --> 00:44:26.676
<v SPEAKER_3>But the decision makers in Ottawa are right now weeing, making an exemption to the Oil Tanker Moratorium Act.

00:44:26.676 --> 00:44:34.616
<v SPEAKER_3>And this would be for a possible large oil pipeline to BC's Northwest Coast on the major projects list.

00:44:34.616 --> 00:44:44.276
<v SPEAKER_3>So, you've already gone through quite a bit of the safety, the new safety protocols that exists in BC, and all the ways

that these risks can be managed.

00:44:44.276 --> 00:44:52.416
<v SPEAKER_3>But do you think there's any more information that would be helpful for people in Ottawa to come to a decision on this?

00:44:54.776 --> 00:45:04.136
<v SPEAKER_1>Well, just from a lay perspective, I think a lot of that could be flushed out if you start the review of the Act.

00:45:04.136 --> 00:45:05.076
<v SPEAKER_1>Right.

00:45:05.076 --> 00:45:23.096
<v SPEAKER_1>You would have the opportunity of people in the industry bringing forward what their practices, procedures, their protocols, how they would envision enhancing mitigation measures.

00:45:23.096 --> 00:45:33.576
<v SPEAKER_1>And it would form an educational form for people that are just nervous or anxious about it means to move these cargoes.

00:45:33.636 --> 00:45:52.156
<v SPEAKER_1>I think any or major ports in Canada, if people knew what kind of cargoes were moving around the clock in all conditions of visibility and being handled safely, I think they would be surprised.

00:45:56.676 --> 00:46:12.636
<v SPEAKER_1>And I would say that that would be a convenient way to start because until you identify a project, you can't really launch the term poll, which again is another layer of looking at what are the risks and how can we mitigate them?

00:46:12.636 --> 00:46:18.096
<v SPEAKER_1>And what have we learned from best practices already in similar situation?

00:46:20.516 --> 00:46:21.936
<v SPEAKER_2>That's great.

00:46:24.756 --> 00:46:26.796
<v SPEAKER_2>Final question.

00:46:26.796 --> 00:46:28.316
<v SPEAKER_2>Well, I've got another question after this.

00:46:28.316 --> 00:46:31.216
<v SPEAKER_2>Again, it will be off the script, but Andrew and I have known each other for a long time.

00:46:31.636 --> 00:46:34.936
<v SPEAKER_2>So I want to bring closure to something else.

00:46:34.936 --> 00:46:37.576
<v SPEAKER_2>So don't let me forget Joe to talk about Churchill.

00:46:38.656 --> 00:46:54.456
<v SPEAKER_2>If there was a large pipeline built, another pipeline built to Northwest BC, could you walk through the positives and negatives of the different ports in the region, Kitimat versus Prince Rupert, somewhere further down the coast?

00:46:54.456 --> 00:47:04.836
<v SPEAKER_2>And just for clarity, Andrew, even though it is 120 nautical miles from Kitimat to the open ocean, it's a lot different than the Fraser River.

00:47:04.836 --> 00:47:06.516
<v SPEAKER_2>It's quite a...

00:47:06.516 --> 00:47:07.356
<v SPEAKER_2>I'm not going to call it...

00:47:07.356 --> 00:47:09.396
<v SPEAKER_2>I'm bad at lingo.

00:47:09.396 --> 00:47:12.976
<v SPEAKER_2>It isn't a fjord, but it's pretty big, isn't it?

00:47:12.976 --> 00:47:16.256
<v SPEAKER_2>Like, can you just size it for folks relative to...

00:47:16.256 --> 00:47:18.636
<v SPEAKER_2>Ships can pass in it, correct?

00:47:18.636 --> 00:47:32.116
<v SPEAKER_1>Well, what I will say is, you know, my colleagues from the West Coast who are, you know, intimately familiar with all those waterways would be the best ones to address it.

00:47:32.116 --> 00:47:53.556
<v SPEAKER_1>But the fact that you're moving LNG carriers, which are very similar in dimension to a Suezmax comfortably in and out of Kitimat, the only difference is the Suezmax vessels would be deeper draft.

00:47:53.556 --> 00:47:58.656
<v SPEAKER_1>But as you mentioned, these are deep water fjords.

00:48:00.616 --> 00:48:13.996

<v SPEAKER_1>So again, we go back to when you are identifying these locations, you have quite a rigorous format to go through under the term pull requirements.

00:48:13.996 --> 00:48:30.896
<v SPEAKER_1>So you look at your navigational hazards and what can you put in place to help better identify them and mitigate the risks around those hazards.

00:48:30.896 --> 00:48:33.616
<v SPEAKER_1>And you look at all your natural hazards.

00:48:33.616 --> 00:48:40.816
<v SPEAKER_1>So it would be your tidal range, what kind of currents that are generated.

00:48:42.316 --> 00:48:46.996
<v SPEAKER_1>What you look at things like a storm surge.

00:48:46.996 --> 00:48:54.716
<v SPEAKER_1>And in the case of Kittumat, they also look at what's the potential of a tsunami and how you can mitigate that.

00:48:55.776 --> 00:49:13.536
<v SPEAKER_1>And it not only looks at how you're maneuvering, you know, the criteria you need for maneuvering and navigating these ships safely, but the structure and the actual lay of the berth that the ship will be docking at.

00:49:13.536 --> 00:49:20.856
<v SPEAKER_1>So that you're not dealing with a contrary current that is, you know, imposing the ship onto the berth.

00:49:20.856 --> 00:49:33.276
<v SPEAKER_1>Maybe you will align the berth so most of the time, but the best instance is you're stemming the current, you know, which makes the whole berthing maneuver much more manageable.

00:49:35.856 --> 00:49:47.236
<v SPEAKER_1>So there's a whole variety of protocols that go in, not only from the government side, but also the industry has a whole list of best practices.

00:49:48.756 --> 00:49:58.316
<v SPEAKER_1>And, you know, your pilots, your pilotage authorities, Coast Guard Transport Canada, they all play a role.

00:49:58.316 --> 00:50:10.876
<v SPEAKER_1>Your tug operators, the how you're, you know, the design criteria for the tugs, looking at what you're going to be, as it you

may have to try to help mitigate when you're doing channel maneuvers.

00:50:13.396 --> 00:50:24.976
<v SPEAKER_1>And you look at your, you know, fatigue requirements, as we see on the British Columbia Coast, that, you know, after eight hours, a pilot has to be relieved.

00:50:27.716 --> 00:50:34.816
<v SPEAKER_2>On that, Andrew, what is the, how long does it take one of those LNG carriers to cover that 120 nautical miles?

00:50:36.936 --> 00:50:50.376
<v SPEAKER_1>I don't have the specifics, but I know that in certain ranges, they will be restricted to escort towing speeds, which could be in the range of 8 to 10 knots.

00:50:50.376 --> 00:50:55.936
<v SPEAKER_1>So, you could potentially have a 15 to 16 hour transit.

00:50:55.936 --> 00:50:57.756
<v SPEAKER_1>That's just rule of thumb.

00:50:57.756 --> 00:51:04.336
<v SPEAKER_1>But there may be a need to create a little more speed restrictions at certain times.

00:51:04.396 --> 00:51:06.316
<v SPEAKER_3>Sure.

00:51:06.316 --> 00:51:11.096
<v SPEAKER_2>So, that's why there's three pilots, because you're going to overlap over two cycles.

00:51:11.356 --> 00:51:14.656
<v SPEAKER_1>And you want to always have two pilots available.

00:51:16.176 --> 00:51:24.316
<v SPEAKER_1>When the Mercer Refinery operating in Halifax, for example, the oil companies themselves asked for two pilots.

00:51:24.316 --> 00:51:26.696
<v SPEAKER_1>It wasn't a legislative requirement.

00:51:26.696 --> 00:51:28.696
<v SPEAKER_1>They wanted two pilots.

00:51:28.696 --> 00:51:39.376
<v SPEAKER_1>They wanted us to board the tankers early, walk the crew through all the procedures that we were going to go through for the channel transit and for docking the tanker.

00:51:40.896 --> 00:51:54.716
<v SPEAKER_1>One pilot would actually do a walkabout of the tanker, looking at all the strong points where the tugs would secure, make sure that the anchors were clear and ready to drop if there was an emergency.

00:51:55.936 --> 00:51:57.896
<v SPEAKER_1>So you're busy.

00:51:58.856 --> 00:52:04.356
<v SPEAKER_1>You're busy and then you're backing up your senior pilot who has the conduct of the ship.

00:52:04.356 --> 00:52:06.876
<v SPEAKER_1>And then they'll do, they'll switch roles.

00:52:08.436 --> 00:52:12.716
<v SPEAKER_1>So we found it, you know, it's a very effective.

00:52:12.756 --> 00:52:25.416
<v SPEAKER_1>And so yet you were constantly engaged with the crew and it was a very positive master pilot exchange that continued throughout the transit.

00:52:27.856 --> 00:52:30.136
<v SPEAKER_2>Can I ask one more question, Joel?

00:52:30.136 --> 00:52:31.916
<v SPEAKER_3>Yeah, yeah, for sure, Colin.

00:52:33.056 --> 00:52:39.116
<v SPEAKER_2>Because I want to bring closure to this issue of the Churchill report.

00:52:39.116 --> 00:52:40.576
<v SPEAKER_2>Andrew and I have had this discussion.

00:52:40.696 --> 00:52:53.216
<v SPEAKER_2>I think I'm right in that it's not possible to bring a sizable carrier into the Port of Churchill to haul oil because it can get in there unladen.

00:52:53.736 --> 00:53:15.436
<v SPEAKER_2>But if I remember our conversation correctly, Andrew, even an Afromax carrier cannot exit the terminal laden because of the depth laden, having to make a fairly rapid, well, rapid in shipping terms when it leaves the port.

00:53:15.436 --> 00:53:17.596

<v SPEAKER_2>Is that not correct?

00:53:17.596 --> 00:53:17.976
<v SPEAKER_1>Yeah.

00:53:17.976 --> 00:53:26.916
<v SPEAKER_1>So you're Afromax tankers, you're looking at in the range of maybe up to 15.5-meter draft.

00:53:30.376 --> 00:53:38.736
<v SPEAKER_1>The Port of Churchill was designed for grain carriers, so your typical lift would probably be in the range of 30,000 tons.

00:53:41.396 --> 00:53:52.416
<v SPEAKER_1>With the Afromax fully loaded, you're probably looking at 100,000 ton dead weight.

00:53:52.416 --> 00:54:01.916
<v SPEAKER_1>So you've got to do massive port reconfiguration to entertain that class of vessel.

00:54:03.136 --> 00:54:12.236
<v SPEAKER_1>Typically, the bulk carriers that are in that 30,000 ton range are around 180 meters in length.

00:54:12.376 --> 00:54:17.376
<v SPEAKER_1>They're probably panamax in their breadth of 32.2 meters.

00:54:17.376 --> 00:54:25.756
<v SPEAKER_1>Your standard size afromax is about 245 meters in length and about 44 meter breadth.

00:54:25.756 --> 00:54:38.096
<v SPEAKER_1>So, and again, you're looking at a maximum lift of about 650 to 700,000 barrels.

00:54:40.416 --> 00:54:47.616
<v SPEAKER_1>It's a very tight scenario to put that ship into.

00:54:47.616 --> 00:54:52.716
<v SPEAKER_1>Well, physically, it wouldn't work right now, given the configuration of the port.

00:54:52.716 --> 00:54:59.276
<v SPEAKER_1>And I don't know what the cost would be to reconfigure the port.

00:54:59.276 --> 00:55:02.596
<v SPEAKER_1>The other thing you have to realize, it's on a river.

00:55:03.516 --> 00:55:11.436
<v SPEAKER_1>You can only maneuver high-water slack, as it is now, for bulk, dry bulk cargoes.

00:55:13.736 --> 00:55:17.156
<v SPEAKER_1>And then you have a very short season, because of the fresh water is going to freeze.

00:55:17.156 --> 00:55:17.376
<v SPEAKER_2>Right.

00:55:20.696 --> 00:55:21.056
<v SPEAKER_1>So.

00:55:21.716 --> 00:55:25.716
<v SPEAKER_2>I wanted to bring closure to that, because it seems to come up all the time.

00:55:26.936 --> 00:55:40.416
<v SPEAKER_2>And in fact, I wrote something about this years ago, that had I known you at the time, I would have been corrected before I suggested that we haul oil out of the Churchill Terminal, because I think it's a non-starter.

00:55:41.216 --> 00:55:41.616
<v SPEAKER_3>Yeah.

00:55:41.636 --> 00:55:43.716
<v SPEAKER_3>Well, I don't know if that's ever going to be resolved, Kelly.

00:55:43.716 --> 00:55:46.016
<v SPEAKER_3>It's been on the books for how many years?

00:55:46.016 --> 00:55:46.656
<v SPEAKER_3>Like a century?

00:55:46.656 --> 00:55:52.096
<v SPEAKER_2>Well, just keep pounding the table about it, because it's just the mechanics and the logistics.

00:55:52.136 --> 00:56:00.376
<v SPEAKER_2>Perhaps you could have a loading FBSO out there parked and pipe it out there, and then load off of that.

00:56:00.376 --> 00:56:11.816
<v SPEAKER_2>But all of a sudden, the costs become dramatic relative to the buying of cargo or crude oil somewhere else at $4 a barrel transported around the globe.

00:56:11.816 --> 00:56:14.556
<v SPEAKER_2>So it doesn't work.

00:56:14.556 --> 00:56:14.996
<v SPEAKER_2>Sorry.

00:56:15.816 --> 00:56:17.776
<v SPEAKER_2>I'm a bit of a stickler about this one, Joe.

00:56:19.856 --> 00:56:25.956
<v SPEAKER_2>Because we've got an expert here that's given us the straight goods on that particular scenario.

00:56:25.956 --> 00:56:30.776
<v SPEAKER_1>Well, Churchill does good for what the port was designed for.

00:56:32.536 --> 00:56:39.216
<v SPEAKER_1>But you've got to realize the amount of risk that you would have to mitigate is pretty significant.

00:56:39.456 --> 00:56:56.296
<v SPEAKER_1>I always thought it would just be a really good academic exercise to total up all the costs to make that viable compared to completing a pipeline to the East Coast where we have deep water ports that can take the largest tankers in the world.

00:56:56.296 --> 00:57:02.556
<v SPEAKER_2>They come in there with loads from other countries like Nigeria.

00:57:03.276 --> 00:57:04.916
<v SPEAKER_3>No, it's funny.

00:57:04.996 --> 00:57:21.536
<v SPEAKER_3>Russia, for centuries, Russia had a quest, a never-ending quest to secure a warm water port that was free of ice year-round and to get its enormous resources out to the world and to enable that global influence.

00:57:21.536 --> 00:57:27.036
<v SPEAKER_3>Canada has had warm water ports this whole time without any choke points that restrict it.

00:57:32.676 --> 00:57:36.036
<v SPEAKER_3>We're underutilizing what Russia would kill for.

00:57:36.836 --> 00:57:46.196
<v SPEAKER_3>I think that's something that we should consider when we're talking about the Port of Trill, Trill rather than talking about

the excellent ports we already have.

00:57:46.236 --> 00:57:48.516
<v SPEAKER_2>Yeah, exactly.

00:57:49.376 --> 00:57:50.516
<v SPEAKER_3>Yeah, fantastic, Andrew.

00:57:50.516 --> 00:57:51.716
<v SPEAKER_3>Thanks so much for coming on.

00:57:52.396 --> 00:57:59.236
<v SPEAKER_3>And sorry about the short notice on the script changes because of the recent news.

00:57:59.236 --> 00:58:00.676
<v SPEAKER_3>But this is fantastic.

00:58:00.676 --> 00:58:02.176
<v SPEAKER_3>Thank you so much.

00:58:02.176 --> 00:58:04.316
<v SPEAKER_1>No, I really appreciate your time.

00:58:04.356 --> 00:58:05.596
<v SPEAKER_1>It's good to see you, gentlemen.

00:58:05.596 --> 00:58:09.956
<v SPEAKER_1>Again, I hope we can connect in person some date not too far down the future.

00:58:09.956 --> 00:58:17.036
<v SPEAKER_2>Yeah, whenever you're back here, we will set up another roundtable, Andrew, if people would love to hear this conversation.

00:58:17.036 --> 00:58:19.516
<v SPEAKER_3>And one last question for you, though, Andrew.

00:58:19.516 --> 00:58:22.856
<v SPEAKER_3>And this is what our listeners are always interested in.

00:58:23.456 --> 00:58:27.616
<v SPEAKER_3>What's on your bedside table for what we're reading these days?

00:58:30.176 --> 00:58:41.576
<v SPEAKER_1>Well, funnily enough, some of the materials I've been reading lately have to do with gray water discharges from ships.

00:58:43.116 --> 00:58:44.076

<v SPEAKER_2>Oh, yeah.

00:58:44.076 --> 00:58:49.616
<v SPEAKER_1>It's an area where it's causing a little bit of angst in some communities.

00:58:50.956 --> 00:58:57.856
<v SPEAKER_1>And what technology and what future regulations are going toward mitigating that.

00:58:59.116 --> 00:59:07.976
<v SPEAKER_1>So I've been doing a little bit of read up and research to deal with that aspect of things.

00:59:10.196 --> 00:59:15.816
<v SPEAKER_1>Because I had a 47-year career in the maritime industry.

00:59:17.556 --> 00:59:22.976
<v SPEAKER_1>And once it's in your blood, it's hard to walk away from it.

00:59:22.976 --> 00:59:23.956
<v SPEAKER_2>No, we understand that.

00:59:26.476 --> 00:59:32.596
<v SPEAKER_1>And I do a little bit of volunteer work for the Company of Master Mariners.

00:59:32.596 --> 00:59:40.216
<v SPEAKER_1>So I like to keep up to date because there's changes in protocols, legislation, not only globally, but nationally.

00:59:40.216 --> 00:59:46.556
<v SPEAKER_1>And I just find that kind of intriguing to keep ahead of that.

00:59:46.556 --> 00:59:47.096
<v SPEAKER_1>Yeah, fantastic.

00:59:47.096 --> 00:59:48.096
<v SPEAKER_2>Great, Andrew.

00:59:48.096 --> 00:59:49.496
<v SPEAKER_2>Thanks so much.

00:59:49.496 --> 00:59:51.696
<v SPEAKER_1>Okay, you gentlemen have a wonderful day.

00:59:51.696 --> 00:59:53.156
<v SPEAKER_2>Hope to see you sometime this winter.

00:59:53.796 --> 00:59:56.736
<v SPEAKER_1>Okay, let's hope it works out.

00:59:56.736 --> 00:59:58.296
<v SPEAKER_3>All right, take care, Andrew.

00:59:58.296 --> 01:00:00.876
<v SPEAKER_1>Anyway, if it doesn't come, pay me a visit.

01:00:00.876 --> 01:00:02.656
<v SPEAKER_3>Yeah, I'd love to.

01:00:05.416 --> 01:00:11.576
<v SPEAKER_2>Thanks, everyone, for listening to this episode of Energy Security Cubed on The Canadian Global Affairs Podcast Network.

01:00:11.576 --> 01:00:16.096
<v SPEAKER_2>You can find The CGAI Network on iTunes, Spotify and Google Play.

01:00:16.096 --> 01:00:18.276
<v SPEAKER_2>If you like to show, give it a rating.

01:00:18.276 --> 01:00:22.196
<v SPEAKER_2>You can also find The Canadian Global Affairs Institute on Facebook, Twitter and LinkedIn.

01:00:23.556 --> 01:00:31.176
<v SPEAKER_2>If you like this episode and want to help us keep creating content, you can support us by donating at cgai.ca slash support.

01:00:31.176 --> 01:00:34.776
<v SPEAKER_2>Energy Security Cubed is brought to you by our team at CGAI.

01:00:34.776 --> 01:00:39.856
<v SPEAKER_2>Thanks go out to our producer, Joe Calnan and to Drew Phillips for providing our music.

01:00:39.856 --> 01:00:40.776
<v SPEAKER_2>I'm Kelly Ogle.

01:00:40.776 --> 01:00:42.776
<v SPEAKER_2>Thanks for joining us on Energy Security Cubed.