



Canadian Nuclear Workers' Council

Conseil Canadien des Travailleurs du Nucléaire

Spring 2025

National Director's Message

In our "2025 Look-Ahead" [Newsletter](#) we gave some of our reasons for optimism. While in the months that followed we witnessed events that were very unsettling, we remain optimistic. It is recognized globally that we need nuclear energy to meet the increasing demand for clean energy.

Canada has a mature nuclear industry. We continue to lead in this field and have proven we are a reliable partner.

The strength of Canada's nuclear industry was on full display at the Canadian Nuclear Association (CNA) 2025 Conference. To accommodate the growing interest in nuclear energy, the CNA moved their annual conference to a larger venue. It still sold out. Congrats to the CNA, CNA Staff and all exhibitors and speakers for a great conference.

Canada is a true pioneer in the field of nuclear physics and has decades of experience developing nuclear energy for peaceful purposes. This includes our CANDU Reactor technology which has been safely generating electricity, 24/7, for hundreds of days at a time, without carbon emissions, for more than half a century.

But the benefits of nuclear energy go beyond clean, reliable energy. Canada has developed world-class expertise in this space. This expertise aligns with Canada's strategic priorities, in the following critical areas.

- Energy security. Canada has the ability to design, build, operate and fuel our reactors domestically.
- Clean energy. Nuclear generates electricity without CO₂ emissions, and it can support broader



CNWC National Director Bob Walker

decarbonization like reducing or eliminating the CO₂ footprint of oilsands extraction.

- Producing and expanding the use of nuclear isotopes. Medical imaging, equipment sterilization and the diagnosis and treatment of cancer.
- Modernizing Canada's nuclear labs. This ensures their ability to support critical R&D for Canada's evolving nuclear industry.
- Arctic sovereignty and national defense. Providing energy, including electricity and district heating, will enhance Canada's sovereignty and defense of Canada's North, and improve living conditions for Northern Residents. AECL developed the SLOW-POKE 3 expressly for district heating.
- SMRs. Developing and deploying small modular reactors as well as very small or micro reactors for off grid use.
- Good jobs. Canada's nuclear industry currently has a workforce of 89,000. These are high skilled, high-quality jobs. Our highly proficient and experienced workforce is a huge national advantage. Building this capacity requires promoting careers in the skilled trades and STEM early, and continued reaching out to underrepresented groups.

Canada can use its nuclear expertise to build a prosperous and sustainable future: clean and reliable energy, environmental protection, energy security, advancing human health, sovereignty/national defence and high-quality employment opportunities. Let's continue fostering innovation and become a global clean energy leader.

Bob Walker



Alberta literal pipe dreams: an alternative

Alberta's Pathways to climate viability In the [CNWC policy position on industrial electrification](#), we dismissed carbon capture and sequestration (CCS) as an approach to fighting climate change and CO₂ emissions reductions at scale. CCS is non-viable, simply a way to temporize until the pendulum of public interest in climate swings back to disinterest.

CCS was the technological basis for the Pathways Alliance, a collection of Alberta oil patch majors. Pathways proposed piping captured oilsands CO₂ to vast underground reservoirs. Those companies know full well just how non-viable CCS is. That's why they admitted it could not work without massive financial support from multiple levels of government.

In fairness, Pathways members have been saddled for decades with weak policy direction from governments. Likely they settled on CCS after watching governments ham-fist through the climate file, chasing accolades from green groups offering non-solutions like wind and solar. Some members, like Suncor, a company we've profiled at length, had the good sense and backbone to doff wind power, upon realizing first hand it is based on false advertising.

LNG the pathway to salvation? Governments' big problem with the oilsands is less that they are the biggest CO₂ emitters in the country than that they are also the biggest moneymakers. We noted Suncor's September 2024 trailing 12-month revenue was over \$50 billion; Cenovus's nearly \$56 billion. That's from sales of bitumen, to meet demand for transport energy. While people generally assume this demand will continue at current levels into the future, some alarming contingencies, beyond climate-change-fueled extreme weather, lurk in the shadows of possibility.

Chief among these is the EV. As mentioned, oilsands product is the feedstock for liquid transport fuel. More electrified personal and commercial transport, less demand for oilsands product. Yes, EVs are currently targeted to affluent car owners, which constrains their penetration into vehicle fleets. The very real prospect of EVs less than half the current median price makes the oil patch, and governments, nervous; hence Canada's 100 percent tariff on Chinese EVs.

But the affordable EV is coming; it's just a matter of time. Oilsands producers, as we say in the "Industrial Electrification" policy position, must plan now for an electrified future. We quantified in the last *Newsletter* the amount of natural gas that goes into oilsands production. Less oilsands production means more gas available to sell. We mentioned the growing global market for liquefied natural gas. Europe is a huge LNG export destination now that piped Russian gas is drastically curtailed following Russia's Ukraine invasion. Would the EU rather import Canadian LNG instead of American?

The non-liquid pathway We also said oilsands producers must expand their conception of energy to non-liquid forms. An Alberta company, TC Energy, already did this, nearly 25 years ago, when it bought into Bruce Power, which produces electric, not liquid, kilowatt-hours. TC Energy has profited handsomely from this investment. Could similar capital investments by oilsands majors produce a similar result? See the EV section above for an idea of the potential market for electric kWh. Since the EV revolution is driven by climate change concerns, investors in power generation should invest in nuclear. As mentioend, Suncor knows first hand that wind cannot deliver reliable power.

A workforce second to none poised for the zero-carbon pivot The oilsands workforce is high skilled and professional. Anybody who can turn tar entrained in sand into the leading moneymaker in an advanced industrial economy possesses the technical wherewithal to repurpose their impressive skillsets to other energy sectors, including nuclear.

The only viable pathway to decarbonization in Alberta is to stop burning/reforming natural gas. That frees up billions of kWh of gas for export, as LNG. An Alberta nuclear plant could facilitate this, and solve BC's Site C problem, in a single stroke, CO₂-free. Then our complaint in "[Worth repeating](#)," below, is redressed.

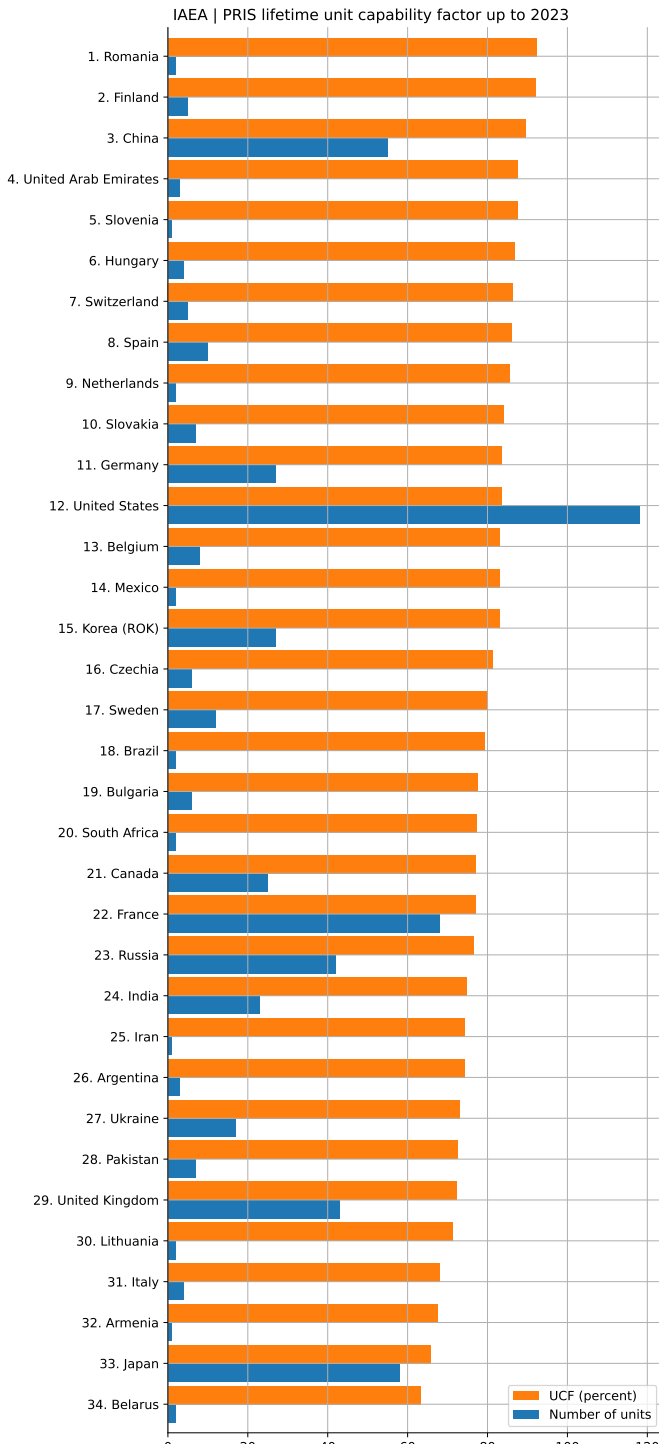
Canadian dollars on the Baltic, II: worth the healthy bones of a single Pomeranian CANDU MONARK?

In the previous edition of the *CNWC Newsletter*, we voiced our support for Westinghouse's Canadian government-supported foray into Poland. We said this was good for Poland, good for the environment, and good for global security.

That was before January 20 2025. Things have changed. America, in addition to starting a trade war with the whole free world including Poland, has switched sides in the Russo-Ukrainian War. It now supports Russia. Poland, a literal front-line state on NATO's eastern flank, has been abandoned by NATO's creator. A U.S. government rep, in a tweet visible to millions, called the Polish Foreign Minister a "little man," and told him to "be quiet." As of this writing no orders are pending



for American civilian nuclear technology. How willing is Poland today to Buy American, even if the American tech is owned by a Canadian company? The AP-1000 supply chain would likely mostly be in America.



nuclear facilities. While we are happy, and not the least bit surprised, that 3 countries in the top fifteen unit capacity factor

CANDU vs EPR CANDU suddenly has exactly one non-Russian, non-American competitor in the EU. That is Framatome/EDF's EPR. This radically changes the competitive calculus, should AtkinsRéalis take a shot at winning this hugely important new overseas customer. Should the Canadian government support *that*?

Of course the answer is yes. Poland must go nuclear. It must not go nuclear with Russian or American technology and definitely not under American trade rules, which now cannot be trusted. With the competitive field narrowed down to exactly two companies, one of them Canadian, Canada should help Atkins at least try to win this sale.

We took a pro-Westinghouse position the last time. We still support our employer Cameco, majority owner of Westinghouse. We also understand how offensive America's insult to Poland is, and how deeply America's switch to a pro-Russian position in Ukraine endangers Poland and Europe at large. We understand shelling out huge dollars on an American nuclear brand likely is a political non-starter now in Poland. It's not your fault, Westinghouse.

By the Numbers

Human indoor temperature control: the electric grid's biggest service Space heating is Canada's biggest energy demand, by far. It typically is not what people mean when they talk about "energy." That term usually refers to petroleum or grid electricity, depending on who's using it.

In cold countries like Canada, the energy for space and water heating is the "foundational" energy. Without it, we couldn't even get past first base. Being able to function indoors in shirt sleeves when it's -10°C outside, or even $+10^{\circ}\text{C}$, is something we take for granted. But without the energy to keep our indoor space between 24°C and 27°C , we'd spend winter days in sweaters, touques, and long underwear. Typing at a keyboard would be uncomfortable.

Heating demand is highly variable, dependent on outside temperature. [Hourly temperature readings in January 2024 in Ottawa](#) saw outdoor temperatures from -18°C to 4.9°C , with half the 744 hours below -5.5°C .

Nuclear heat, and the capacity factor factor: a lesson for Ontario The IAEA PRIS figure on the previous page shows [national lifetime capability factors of the nuclear fleets](#) in the 34 countries with IAEA safeguards on civilian



(UCF) performers have CANDUS in their national fleets, including the #1-, #3-, and #15-place UCF, we caution readers to not despair that Canada is “only” in 21st place. Canada’s CANDU fleet is not in homogeneous circumstances; mostly located in Ontario, the fleet has had to maneuver through ever-changing political grid priorities.

Nor should readers infer that France’s 77 percent fleet UCF, same as Canada’s, means France is less proficient than, say, the United States at running a nuclear reactor fleet. True, both countries possess fleets much larger than those of all other countries except Japan. But France’s situation is much different than the US’s. The French economy is more electrified than the American. While American per-capita electricity usage is twice French (roughly 12,000 kWh annually in 2023, versus 6,000), France’s share of electricity for transport is nearly 6 times America’s. This is nearly all for rail.

The struggle to control residential indoor temperature: France and USA The residential sector in France accounts for a very similar proportion of total electricity use as the American (38.3 percent FR, 40.6 percent US). [Nearly a quarter of French residential electricity use is for space heating](#); in America, [nearly a fifth](#). Both countries’ electricity demand for “human indoor temperature control”—used to maintain indoor temperature at the “shirt sleeves” range mentioned above, as well as for refrigeration, cooking, and domestic hot water—accounts for close to 70 percent of the total.

But the PRIS plot suggests what’s meeting that demand. France has very low AC demand; America’s is much higher. AC handles a temperature difference of 5°–15°C; space heating 10°–40°C. This explains the lower French UCF than American—higher range means greater demand fluctuations, and greater variability in the supply to meet it. France’s supply is mostly nuclear, so nuke plants vary output more, hence lower CF. Also, more of France’s space heating energy is emission-free.

In America, only the baseload portion of the demand for “human indoor temperature control”—DHW, refrigeration—is being met with however much nuclear is in the supply mix of the grid in question; another major difference between the two countries is grid governance. In America the variable portion of the demand is met with fossil generation, with some variable renewables mixed in to maintain the “green” pretense. It’s the same in Ontario; see the figure below. So while America’s nuclear fleet has a higher CF, France’s does more of the work of meeting variable space heating demand.

Our major employers

Ontario Power Generation (OPG) Darlington unit 1 began producing Cobalt-60 in February 2025, for the first time, and now has joined units at Pickering B and Bruce B in producing one of the world’s most vital medical and industrial isotopes. Co-60 will be harvested after a 3-year activation campaign. Unit 1’s power production since Jan 1 has been rock steady: 863 MW mean, with a standard deviation of 12 MW through the 2,664 hours from January 1 through April 21; see the plot below. From electronvolts to megawatt-hours, DNGS-1 does it all. The plot also shows which class of generator meets demand above baseload. [Link here](#) ♦ OPG reported strong financial and operational performance for 2024, noting major progress. The DNGS refurb remains on track for completion within the \$12.8 billion budget. OPG also highlighted steps toward deploying SMRs and renewing hydro capacity. [Link here](#) ♦ OPG is working with the Town of Port Hope and area First Nations to explore new build at the Wesleyville site. Nanticoke and Lambton, former sites of coal-fired plants, are also under consideration. [Link here](#)

Bruce Power Bruce Power in late February successfully completed installation of all eight steam generators in Unit 3—a huge milestone in the Major Component Replacement (MCR) Project. The components were made in Cambridge Ontario by CNWC employer BWXT. [Link here](#) ♦ The Independent Electricity System Operator (IESO) in early April approved the next phase of MCR—Unit 5. This will build off the successful Unit 3 MCR. The CANDU refurb workforce is the most proficient in the world. [Link here](#) ♦ BP in mid-January asked the IAAC to suspend its impact assessment for the “C” site. The IA timeline for the possible 4,800 MW project remains at 111 days. That’s a popular number in Canadian nuclear: Darlington “B” was EA-ed for that amount, and Energy Alberta’s own recently filed IA gives the same as the upper limit for a possible project in Peace Country. [Link here](#) (Bruce) and [here](#) (Energy Alberta).

NB Power In April 2025, CNSC fined NB Power nearly \$25,000 for safety violations at the Point Lepreau station. A license condition (PROL 17.01/2032) related to worker fatigue requires a recovery period of at least 72 hours following three or more consecutive night shifts for safety-sensitive positions. Bugs in shift-scheduling software were the cause of the issue, and while the utility noted them it did not adequately address them, according to CNSC. [Link here](#) ♦ In January 2025,

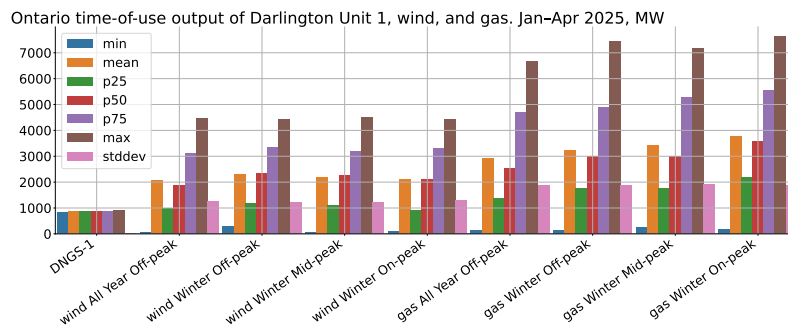


the New Brunswick government ordered a third-party audit of NB Power’s billing practices due to widespread complaints. Many New Brunswick homes heat with electricity, and Lepreau’s numerous unscheduled outages—all related to the non-nuclear side of the plant—have forced NB Power to rely on expensive Bunker C–fired generation to keep homes warm. [Link here](#) ♦ On March 24, 2025, the Point Lepreau station resumed operations following a cooling fan repair. [Link here](#)

Cameco Cameco in early January halted production at its Inkai joint venture in Kazakhstan due to a lapse in government authorization. That followed a visit to Kazakhstan by Vladimir Putin after the US election in November, suggesting Russia is leaning on another former Soviet republic in another critical energy sector. Production resumed late January, but the halt is troubling. Putin doesn’t like Kazakhstan’s plan to ship uranium to Europe via the so-called Middle Corridor, which connects China to Europe through the Caspian Sea and South Caucasus, bypassing Russia. Underlying all this is the future of Rosatom. Biden sanctioned the company; Trump’s forbearance of Russian aggression in Ukraine *de facto* lifts them. Cameco is caught in a geopolitical vice and its Kazakh JV faces an uncertain future. ♦ Westinghouse, majority-owned by Cameco, admitted it has pulled out of the UK SMR competition by not submitting its bid on time. The competition rules changed. The government now says only one vendor may be selected; initially it had said it would select two. It is unclear if that is the reason for the pullout; neither the government nor Westinghouse would comment. [Link here](#)

Canadian Nuclear Laboratories (CNL) Is there demand for uranium isotope separation in Canada? There should be. Fuel for smaller, more maneuverable power reactors, and fission product isotopes like Cs-137, Sr-90, and of course the Mighty Moly, would immeasurably strengthen Canada’s energy and national security. Our employer CNL would have many decades’ worth of R&D, not to mention commercial development opportunities. U-separation would of course require a fundamental shift in Canada’s nuclear policy. Are we up to it? ♦ Speaking of energy security, small reactors, and research, CNL recently partnered with University of British Columbia in MITACS-funded research into converting forest industry waste into TRISO fuel–grade graphite. Most graphite is either mined or synthesized from hydrocarbons. If the partnership can figure out a way to produce graphite, a form of carbon, of nuclear-grade purity, then not only can carbon in forest waste be permanently sequestered, but domestic graphite-moderated reactors could be in Canada’s future. [Link here](#)

Kinectrics On January 7, 2025, BWXT announced plans to acquire Kinectrics for \$525 million, enhancing its commercial nuclear and radiopharma portfolio. The acquisition is expected to close mid-2025. [Link here](#) ♦ Kinectrics completed its acquisition of Wood Group’s Nuclear Romania business, expanding its European operations. [Link here](#) ♦ Kinectrics agreed to acquire Wood’s Nuclear Americas and Romania entities to strengthen its nuclear lifecycle services. [Link here](#)



CNWC CCTN Newsletter is published four times a year by the Canadian Nuclear Workers' Council.
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Canadian Nuclear Workers' Council
The collective voice of organized labour in the nuclear industries
 The Canadian Nuclear Workers Council (CNWC) is an umbrella organization of Unions representing workers in all sectors of the Canadian nuclear industry. Founded in 1993, it represents sectors including electric power utilities, uranium mining and processing, radioisotope production for medical and industrial purposes, nuclear research, construction and trades in Ontario and labour councils in host communities.

Members include Locals of: International Association of Firefighters • Canadian Union of Public Employees • International Brotherhood of Electrical Workers • International Association of Machinists & Aerospace Workers • International Federation of Professional and Technical Engineers • Power Workers' Union • Provincial Building and Construction Trades Council of Ontario • Professional Institute of The Public Service of Canada • Public Service Alliance of Canada • Society of United Professionals • Society of Professional Engineers and Associates • United Steel Workers • UNIFOR • District Labour Councils (Grey/Bruce, Durham, Lindsay, Northumberland, Ottawa, and Saint John).



What others are saying (or NOT saying... about demand)

“Energy Alberta has submitted its Initial Project Description to the Impact Assessment Agency of Canada for the proposed Peace River Nuclear Power Project. The public is now being invited to provide comments on it.

A rendering of the proposed Peace River plant (Image: Energy Alberta) Energy Alberta is proposing to build a nuclear power plant on a site covering 1424 hectares in the Peace River area of Northern Alberta. The plant would include two to four Candu Monark reactors. The facility would produce up to 4800 MWe and operate for about 70 years.

The Initial Project Description provides an early overview of the proposed project, including key aspects of the design and regulatory process, and is intended to inform stakeholders and support engagement efforts that will help refine the final project design.

The Peace River project is subject to an integrated assessment to meet the requirements of both the Impact Assessment Act and the Nuclear Safety and Control Act. The Impact Assessment Agency of Canada (IAAC) and the Canadian Nuclear Safety Commission (CNSC) are working together on the integrated assessment to achieve the goal of “one project, one assessment”.

IAAC and the CNSC have now invited Indigenous Nations and communities, and the public to review the summary of the Initial Project Description and provide comments on the proposed project.

IAAC said comments “should be based on local, regional, or Indigenous Knowledge of the site or surrounding environment, or provide any other relevant information that may support the conduct of the assessment. This feedback will help IAAC and the CNSC prepare a summary of issues for the proponent”.

Comments can be submitted online until 14 May. All comments received will be published online as part of the project file, IAAC noted.

“Our goal is to help build a new, secure and sustainable economy for all Albertans utilising Canada’s world-class Candu nuclear technology,” said Energy Alberta CEO and President Scott Henuset. “Canada’s nuclear industry is already a robust economic engine creating high-paying jobs and generating significant revenue for governments and it’s time to bring these opportunities to Alberta.”

He added: “Energy Alberta has been actively engaged with local communities and Indigenous Nations and we are committed to responsible and transparent relationships throughout the life of the project. By working closely and in consideration of local interests, we will ensure the project benefits all Albertans while remaining aligned with our core values of safety, sustainability and environmental stewardship.”

Source: *World Nuclear News*, “Public comments invited on proposed Alberta nuclear project”

<https://www.world-nuclear-news.org/articles/public-comments-invited-on-proposed-alberta-nuclear-project>

Worth repeating

“The problem with nuclear-in-the-oilsands ideas is, nobody in the oilsands seems interested. And there are excellent reasons for that, at least as far as Suncor is concerned. We mentioned that the capital markets have seemed unconcerned that Suncor is an oilsands company. Nor do they seem concerned that Suncor just upped Base Plant’s powergen capacity to 856 MWe, implying a concomitant new process heat capacity three times that... . Does this suggest Environmental, Social, and Governance (ESG) capital market activism had no effect on Suncor’s ability to finance Base Plant expansion? Yes it does.

“There are other, non environmental reasons Suncor is disinterested in nuclear energy. We discuss these reasons in “**By the Numbers**,” below. Any Canadian nuclear utility perhaps mulling over whether to get involved in the new Energy Alberta, and avoid potential “springs to catch woodcocks,” might want to give it a read.”

Source: *CNWC Newsletter*, “January 2025 Look Ahead edition,” p.6. [\[01;31m\[Khttp\[m\[Ks://cnwc-cctn.ca/wp-content/uploads/2025/01/news_jan_2025.pdf](https://cnwc-cctn.ca/wp-content/uploads/2025/01/news_jan_2025.pdf)