



**October 4, 2023**  
**9th Annual Saskatchewan Suppliers Forum**

# OCNI

The **Organization of Canadian Nuclear Industries** (OCNI) represents a broad range of Canadian nuclear suppliers – majority of members are SME's

## Vision

To drive and strengthen a thriving Canadian nuclear supply chain through innovation and leadership

## Mandate

To deliver value to our members through programs and initiatives that support success in the domestic and international nuclear markets



### CONNECTION

Linkages between suppliers & utilities .



### CAPABILITY

Increase supplier skills and resources



### GLOBAL REACH

Develop international opportunities.



### ADVOCACY

“Ontario Nuclear Advocacy Team”

*241 member companies / 15,000 highly skilled people increasing to 20,000 while Ontario refurbishment projects are underway*



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# CANADIAN SMR Excellence



**CANADA HAS AGREED ON  
AN INTEGRATED APPROACH  
TO A NATIONAL ROLL-OUT OF SMRs.**

#### STREAM 1

- First grid-scale SMR of 300 MW to be built by Ontario Power Generation by the end of the 2020's
- Subsequent units in Saskatchewan in the 2030's

#### STREAM 2

- Target date: 2030s – ARC Clean Energy and Moltex Energy Canada deploy two 4th Gen advanced SMRs at Point Lepreau Nuclear Generating Station, New Brunswick.
- Terrestrial Energy and X-Energy are other Stream 2 choices

#### STREAM 3

- SMW Global first power gas-cooled fast reactor demonstration unit at Chalk River Nuclear Laboratories underway. Expected completion: 2026
- Westinghouse's micro SMR is another Stream 3 choice

**200**

Canadian based nuclear suppliers ready to support the deployment of SMRs around the world

**14**

Canadian academic institutions supporting SMRs and Advanced Manufacturing

Canadian Advanced Manufacturing in Nuclear Alliance formed to bring together Advanced Manufacturing Expertise in the Nuclear Industry

# OCNI Supports Canadian SMR Strategy

**December 2020 –SMR Action Plan** includes three actions for OCNI:

**OCN01** – Develop a pan-Canadian supply chain

**OCN02** – Promote Advanced Manufacturing Methods to reduce SMR costs

**OCN03** – Promote SMR Workforce diversity & indigenous engagement

**July 2022** – OCNI launches **Ready4SMR** regional project in Atlantic Canada (funded by Atlantic Canada Opportunity Agency)

**April 2023** – OCNI submits Federal application to NRCAN under its Enabling SMR fund for a National **Ready4SMR** program

**September 2023** – OCNI launches **Ready4SMR** in Saskatchewan with partners SIMSA and FNPA, with the support of Saskatchewan's Crown Investment Corp and PrairiesCan.

Programme

**Ready4SMR**  
Program

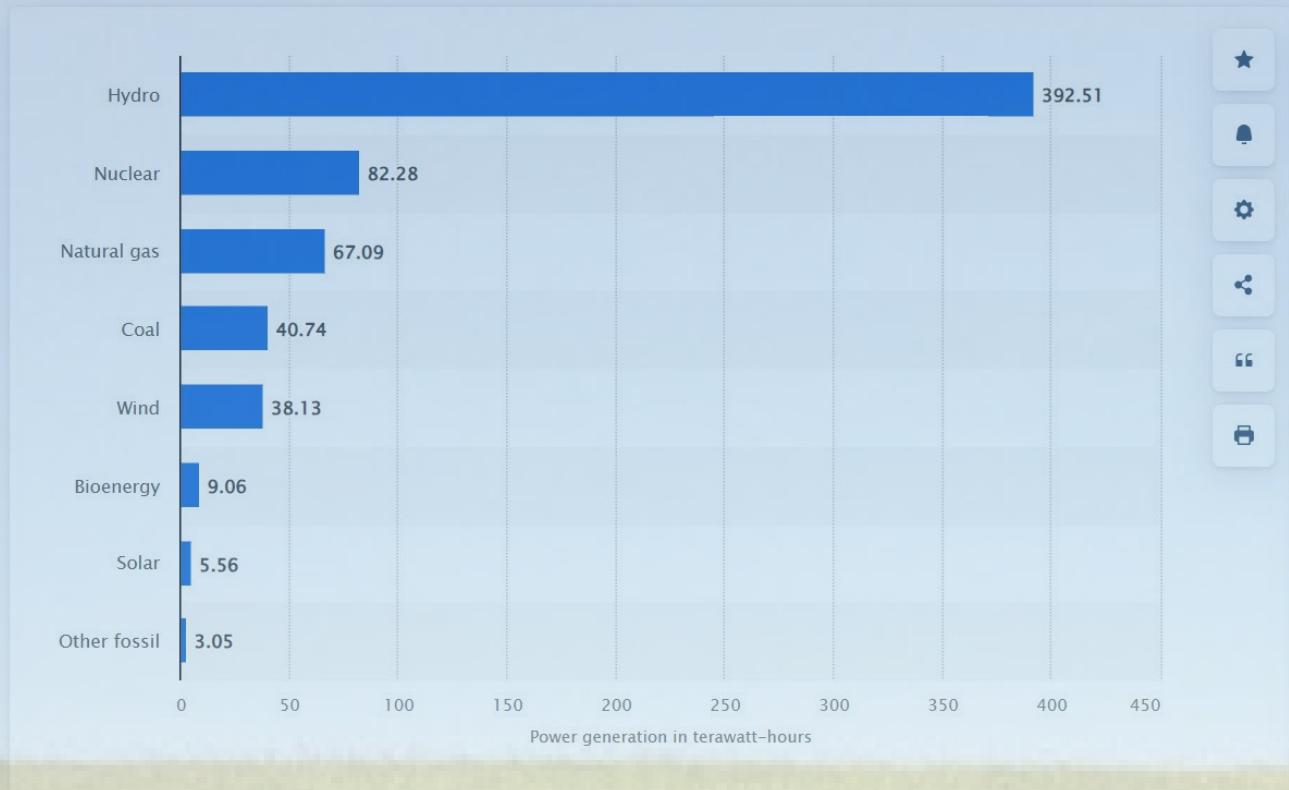
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# Canadian 2022 Electricity Generation

Electricity generation in Canada in 2022, by energy source  
(in terawatt-hours)



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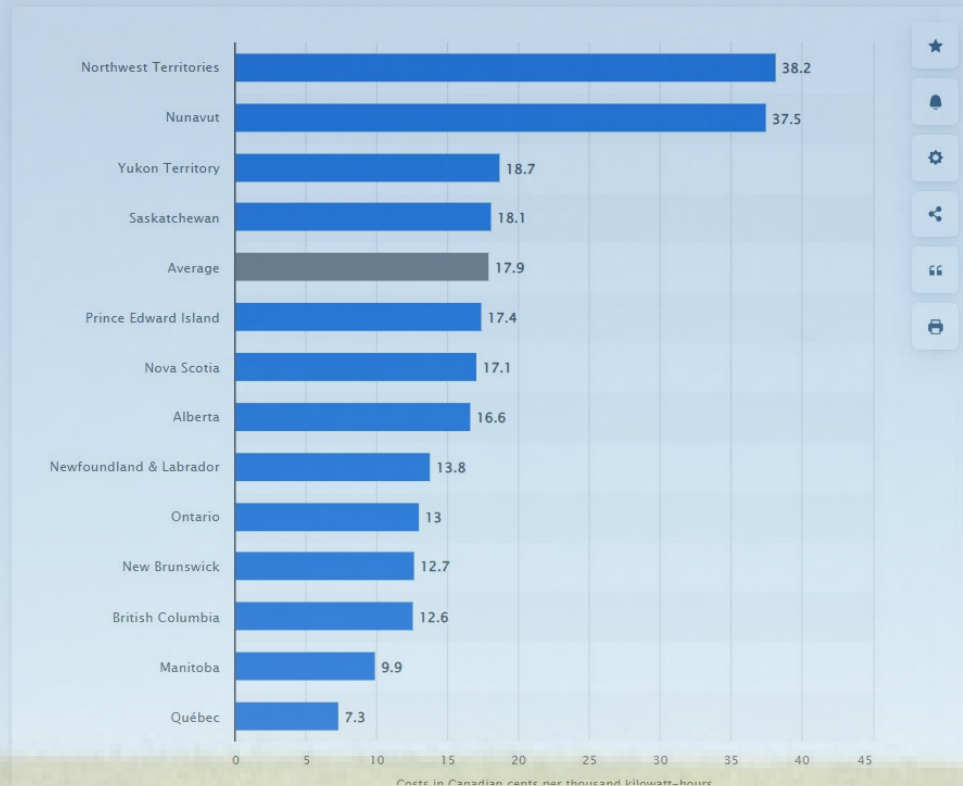
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# Canadian 2021 Electricity Costs

Energy & Environment > Energy

## Electricity costs for end-users in Canada in 2021, by province

(in Canadian cents per 1,000 kilowatt-hours)

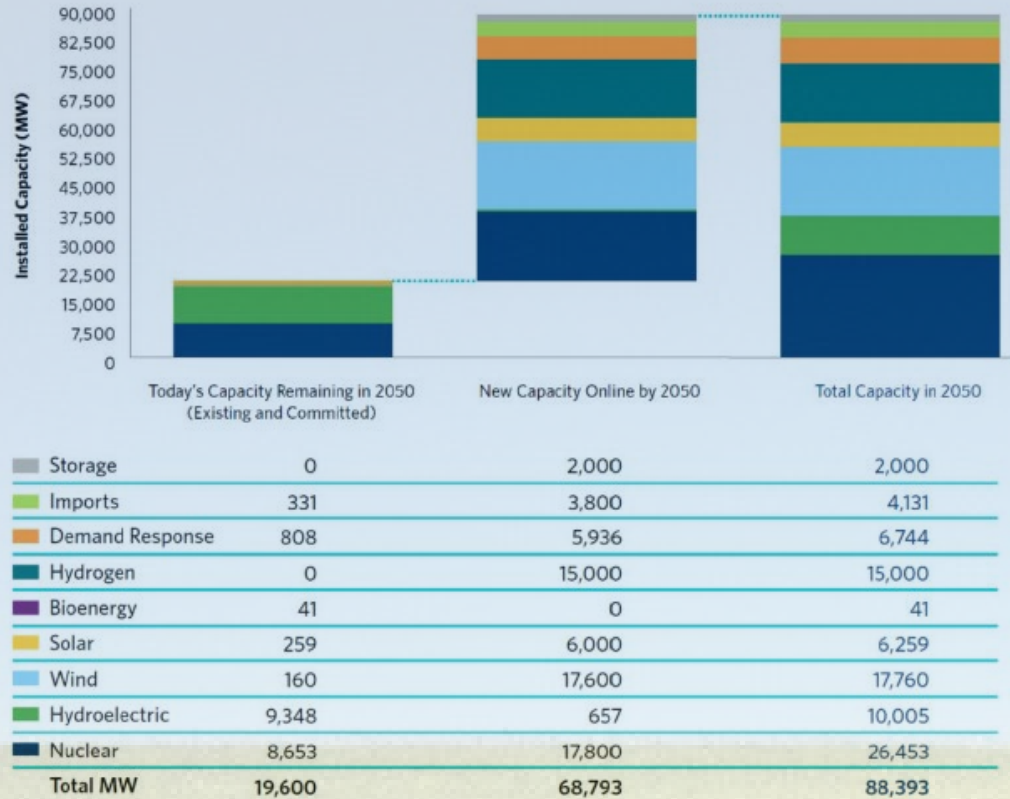


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# Nuclear for Net Zero

Figure 12 | Pathway Scenario - Installed Capacity in 2050



Source: IESO's Pathways to Decarbonization Report,

Natural Resources Canada estimates that SMRs could yield up to \$19 Billion/year from 2030 to 2040 in Canada, and up to \$150 Billion globally between 2025 and 2040.



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**Quality  
Management  
System**

- CSA Standard N286
- ISO 9001
- N299 Series of Nuclear Standards

**Safety**

- Nuclear Safety Culture
- Safety performance

**Indigenous  
Engagement**

- Indigenous Engagement Plan

**Experience**

- Provide support and mentorship through initial phases

OCNI's Ready4SMR program helps companies transition into the nuclear industry by focusing on the requirements expected by our nuclear utilities.

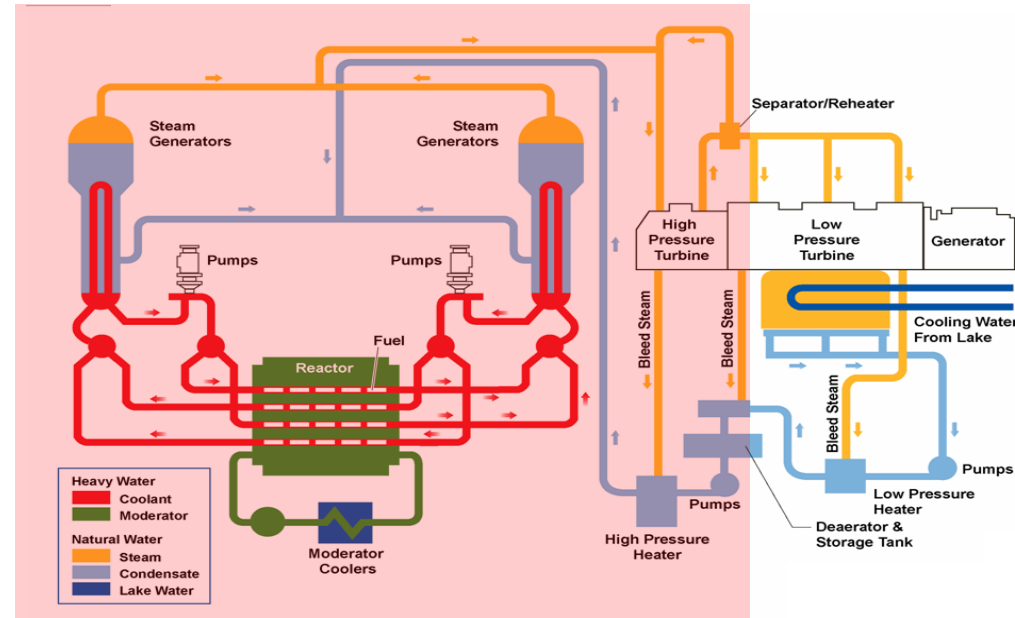


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1. Less complexity
2. Atmospheric/lower pressure
3. Better safety cases/reactivity
4. Modular/enclosed design
5. Advanced Manufacturing/  
Materials/Simulations
6. More experienced industry/regulator  
= more appropriate level of  
conservatism

**Traditional / Large Nuclear**



CSA N299 Cat 1,2,3,4 / N286.7 – 16 / N286-12 / N285.0

*Reducing the components and systems requiring nuclear quality assurance standards, where appropriate, will reduce the overall cost and schedule of SMRs without reducing safety.*



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# Saskatchewan Timeline

Hire Regional  
Manager Q4,  
2023

Initial Company  
Visits Nov 2023  
– Saskatoon  
and Regina

Saskatchewan  
Ready4SMR  
Programming  
Q1, 2024



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# Ready 4 Reconciliation

## Relationship Building

Build strong relationships with Indigenous Nations in nuclear generating regions

## Supply Chain

Expand participation of Indigenous-owned businesses

## Membership Programs

Provide resources to support Indigenous engagement programs

## Employment

Increase hiring and retention rates across supply chain

## Progressive Aboriginal Relations Program

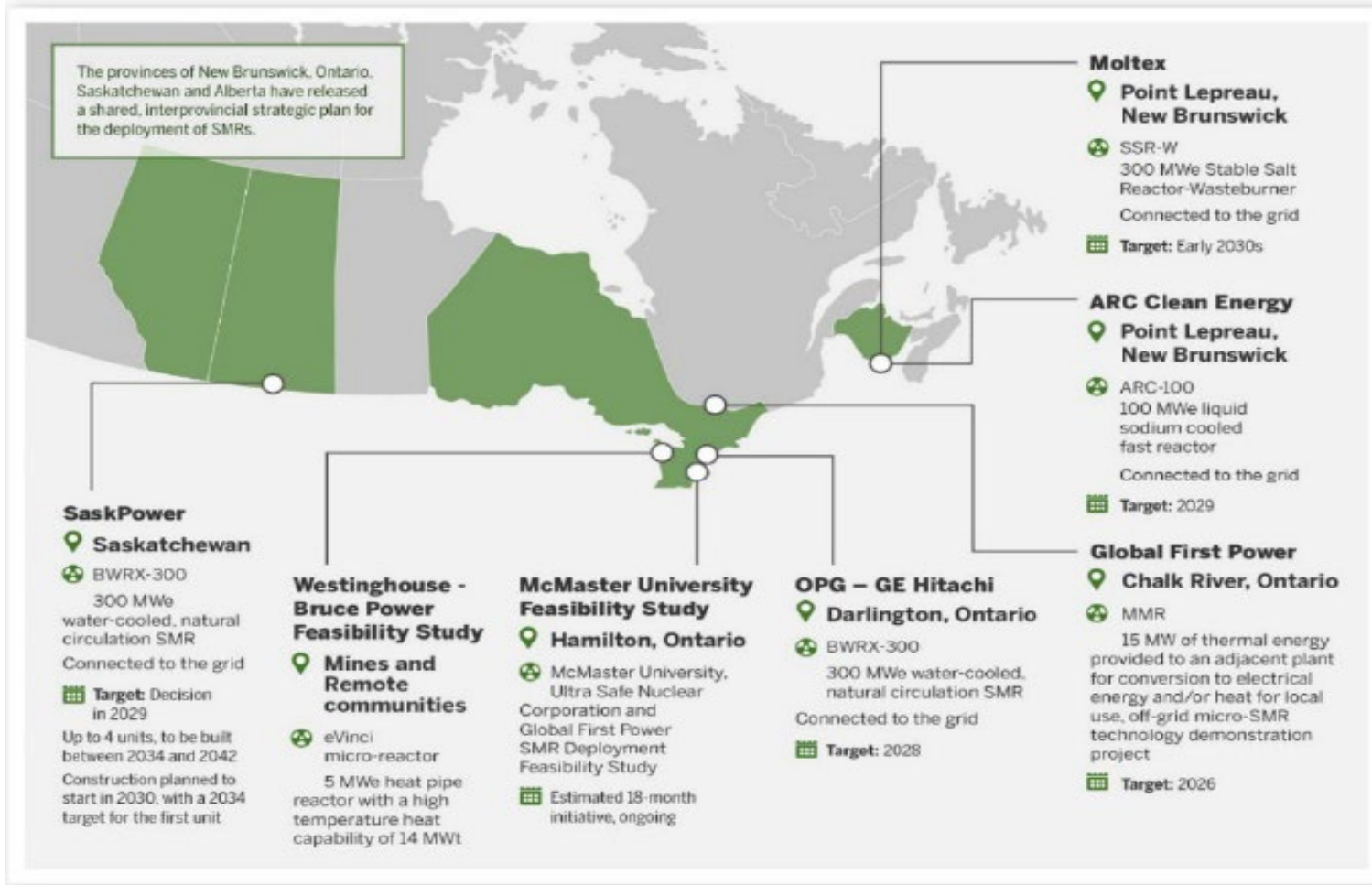
Maintain and advance through the CCAB PAR program



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# Canadian SMR Strategy



The Darlington New Nuclear Project site (i.e., adjacent to the existing Darlington Nuclear Generating Station) is planned to be the site of Canada's first 300 MW on-grid SMR by the end of the decade.

The Darlington site has already completed an Environmental Assessment (EA) and obtained a "License to Prepare Site" for a new-build project from the CNSC, which provides Ontario with a "first-mover" capability for on-grid SMRs.

The construction and operation of one 300 MW SMR over its life is expected to create around 2,460 jobs across the province and increase GDP by more than \$2.5 billion, while lowering CO2 emissions by 0.3 - 2 megatonnes (MT) per year.

# International

***Providing Canadian SMR technology and engineering services to the global market:***

- ***Poland***
- ***Lithuania***
- ***Estonia***
- ***Czech Republic***
- ***Brazil***
- ***UAE***
- ***South-East Asia***
- ***Japan***



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# Save the Date!

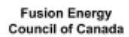
OCNI is pleased to announce that a Canadian team comprised of OCNI, CNL, Kinectrics, Laurentis Energy Partners and Fusion Energy Council of Canada was selected to host Tritium2025 in Ottawa September 21-25 2025.

This is a major international triennial conference focusing on Tritium

We will be advertising sponsorship opportunities in the near future – stay tuned and Save the Date!



HOSTED BY:





**OCNI**

**CAPACITY**

**ADVOCACY**

**CONNECTION**

**GLOBAL  
REACH**

[www.ocni.ca](http://www.ocni.ca)