

# An Update from Canada's National Nuclear Laboratory

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ORGANIZATION OF  
CANADIAN NUCLEAR  
INDUSTRIES

*Clean Energy for a Low Carbon Economy*



Canadian Nuclear  
Laboratories

Laboratoires Nucléaires  
Canadiens

# **OCNI/CNL BANQUET DINNER & INDUSTRY DAY**

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**Date: September 6 & 7, 2023**

**Registration now open!**





# CNL is working with US partners to strengthen preparedness and response to physical and cyber attacks

- ✓ Expertise in operational technology to support critical infrastructure organizations
- ✓ Showcasing the value of hands-on training essential for nuclear power plants



**CNL partnered with the Clearwater River Dënë First Nation to support learning and research related to naturally occurring radioisotopes in the environment.**



A photograph of three researchers in a laboratory. A woman in a white lab coat and a light green hijab is pointing at a laptop screen. Two men, also in lab coats, are looking at the screen with interest. The background shows laboratory equipment, including a fume hood and various instruments.

# Advancing research to support the next generation of reactor technologies

CNL's **Canadian Nuclear Research Initiative** received largest number of submissions to-date in 2022 call for proposals.

CNL will also be hosting Global First Power's proposed small modular reactor.

# HOME OF THE WORLD'S FIRST MICRO-MODULAR REACTOR



**GLOBAL**  
FIRST POWER



**USNC**  
ULTRA SAFE NUCLEAR



HITCH



ONTARIO POWER  
GENERATION





# Enabling the development of novel radiopharmaceuticals.

CNL's **CNRI – Health Stream** announced first partnership with Jubilant Radiopharma earlier this year.

Moving forward with medical isotope production plans.



# Using our experience, expertise and capabilities to lead the development of the Canadian Hydrogen Safety Centre.

- CNL's Hydrogen Team has also expanded efforts:
- ✓ Evaluation of large-scale H<sub>2</sub> based clean fuel production and CO<sub>2</sub> utilization
  - ✓ Integrated H<sub>2</sub> infrastructure design - techno-economic assessments
  - ✓ R&D of hydrogen storage technologies



**Supporting a growing fusion industry with decades of tritium expertise.**




New partnerships are connecting fusion developers with the necessary tritium testing and demonstration equipment to advance their technologies.

A photograph of three individuals (two men and one woman) sitting at a table covered with a purple cloth. In the foreground on the left is a Western University logo sign. The background features a banner with the Western University logo and the text 'Western UNIVERSITY CANADA' and 'nu.ca'. To the right, another banner partially shows 'Nuclear' and 'Nucléaires'. The central text is overlaid on the image.

**CNL is strengthening our role as a nexus between government, industry and the academic community.**

- ✓ A new, robust academic partnership program underway
- ✓ Enabling advancements in R&D innovation through closer collaboration
- ✓ New training experiences for students and a pipeline for recruitment





# We're building world-class facilities and capabilities

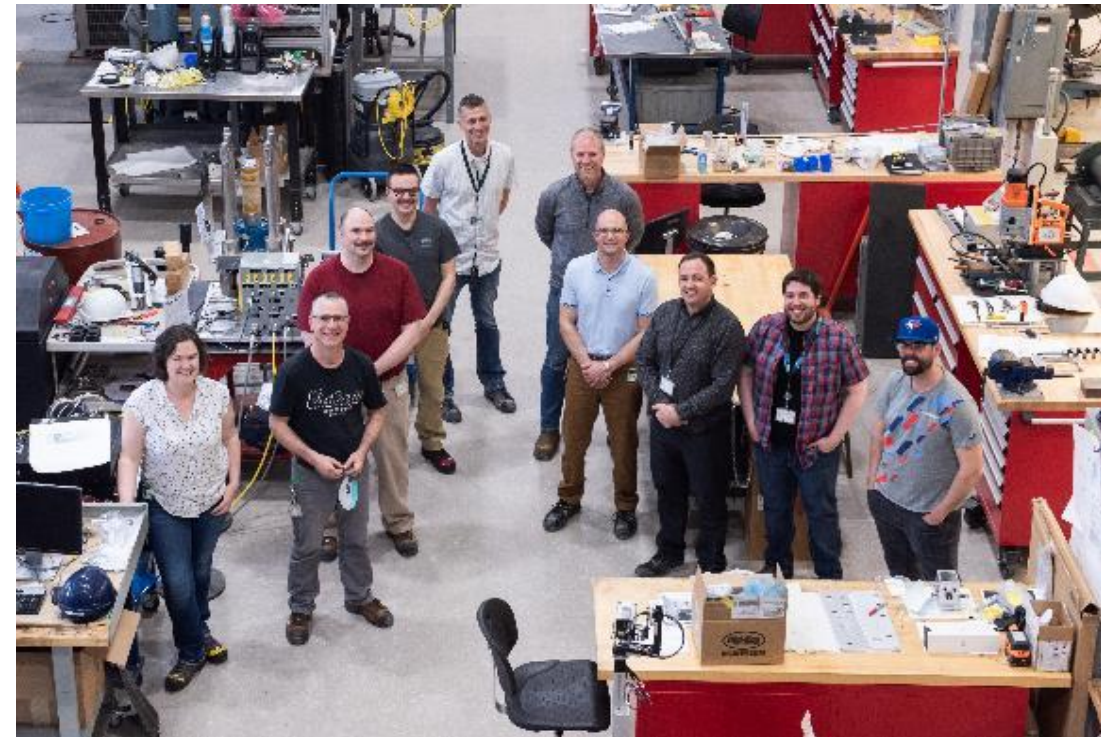
The Advanced Nuclear Materials Research Centre (ANMRC) will be one of the largest nuclear research facilities ever build in Canada.

The Science Collaboration Centre is supporting increased engagement with both industry and academia.

# A Look Ahead



New Learning Opportunities for Post-Secondary & Graduate Students



CNL is Expanding its Workforce

# And There's More!



New Capabilities to Build  
Canada's Expertise



Centres of Research  
Excellence



Hub for Clean Energy  
Demonstration & Deployment  
(CEDIR & SMR Siting)



Radiopharmaceutical R&D  
and Medical Isotope  
Production



A PARTNER IN THE COMMUNITY

**CNL'S FOOTPRINT IN THE  
OTTAWA VALLEY**

# INCREASED ENGAGEMENT AND BUILT RELATIONSHIPS WITH INDIGENOUS COMMUNITIES

- Host monthly meetings with local First Nations communities
- Released an Indigenous Procurement Strategy to create and identify opportunities for Indigenous businesses to engage with CNL and its strategic partners
- Introduced the CNL Indigenous Relations Procurement Strategy
- Drafted a Preliminary Reconciliation Action Plan
- Supported indigenous led studies on the NSDF footprint (Eastern wolf, bats, large mammals etc.)
- Supported four Traditional Land and Knowledge Studies
- Incorporated the perspectives and traditional knowledge of Indigenous Peoples in project planning, documentation and reports

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7% of CNL employees who live in the regions of Pontiac and Renfrew Counties self-identify as Indigenous. (Pontiac: 21%, Renfrew County (7%))

# 2,739

74% OF CNL'S  
WORKFORCE  
RESIDES IN  
RENFREW &  
PONTIAC

## Pontiac County (QC)

Allumettes Island  
Bryson  
Campbell's Bay  
Chapeau  
Waltham  
Fort-Coulonge  
Ladysmith  
L'iles aux Allumettes  
Litchfield  
Mansfield  
Rapides Des Joachims  
Shawville

## Renfrew County (ON)

Arnprior  
Barrys Bay  
Beachburg  
Braeside  
Burnstown  
Calabogie  
Chalk River  
Cobden  
Combermere  
Dacre  
Deep River  
Douglas  
Eganville  
Foresters Falls  
Golden Lake  
Griffith  
Haley Station  
Killaloe  
Laurentian Hills  
Mackey  
McNab/Braeside  
Pembroke  
Petawawa  
Pikwakanagan  
Renfrew  
Rolphton  
Round Lake Centre  
Stonecliffe  
Westmeath  
Wilno



**AN ECONOMIC DRIVER  
FOR THE REGION AND  
BEYOND**

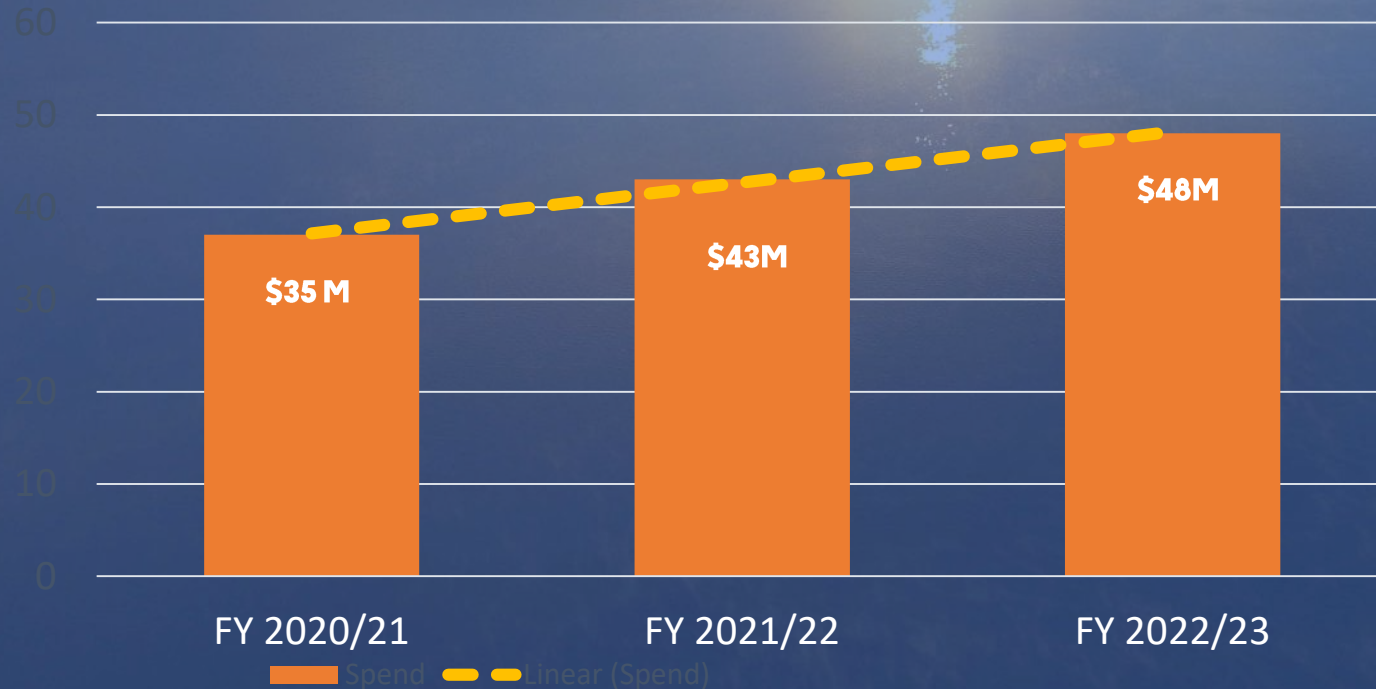
**TOTAL PURCHASE ORDERS**

**\$127,658,474.75**

**SINCE APRIL 2020**

MILLIONS \$

Local Spend (~100KM radius)

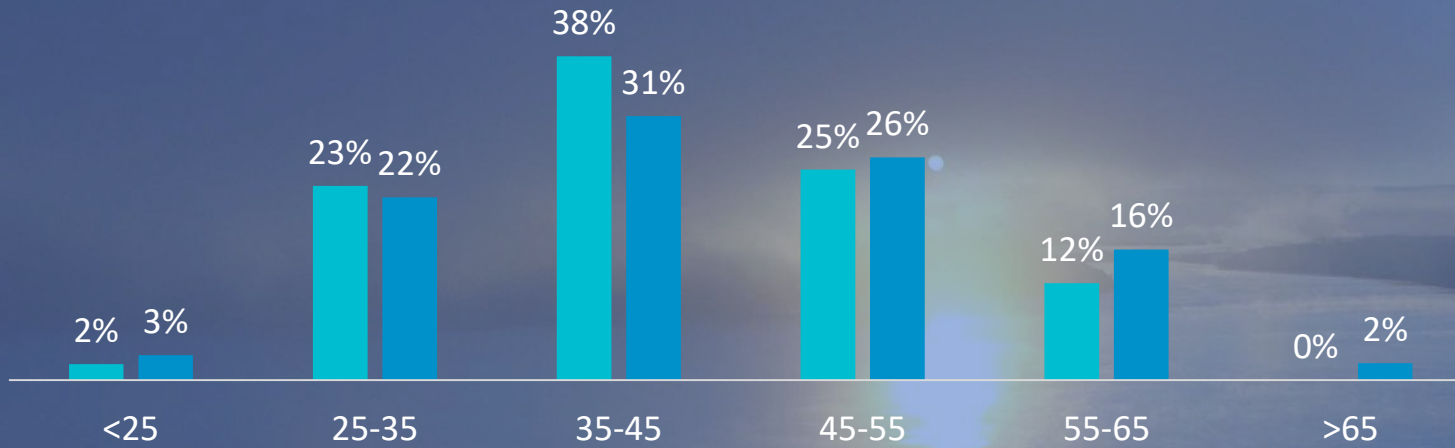


- **139 SUPPLIERS WITHIN 100 KM RADIUS**
- **10,126 PURCHASE ORDERS**

**Note: These numbers more than double when the radius is expanded to 200 km.**

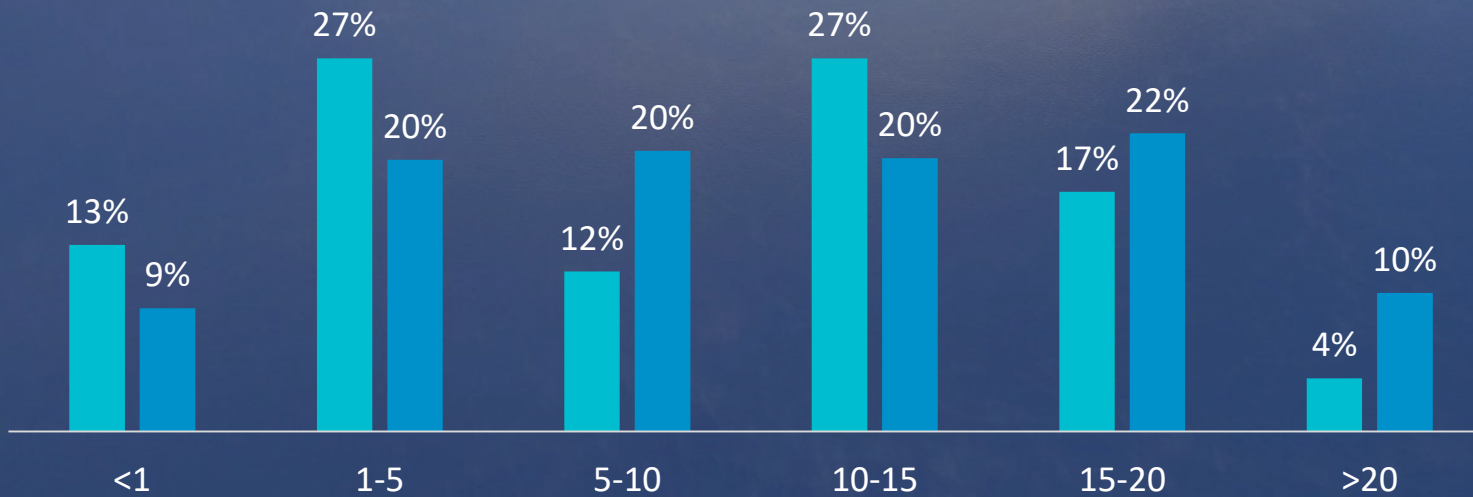
■ Pontiac County  
■ Renfrew County

Age Distribution



**A TOP TIER  
EMPLOYER IN THE  
REGION, ACROSS  
DISCIPLINES AND  
DEMOGRAPHICS**

Years of Service Distribution



**TOTAL SALARIES:  
\$269,000,000**

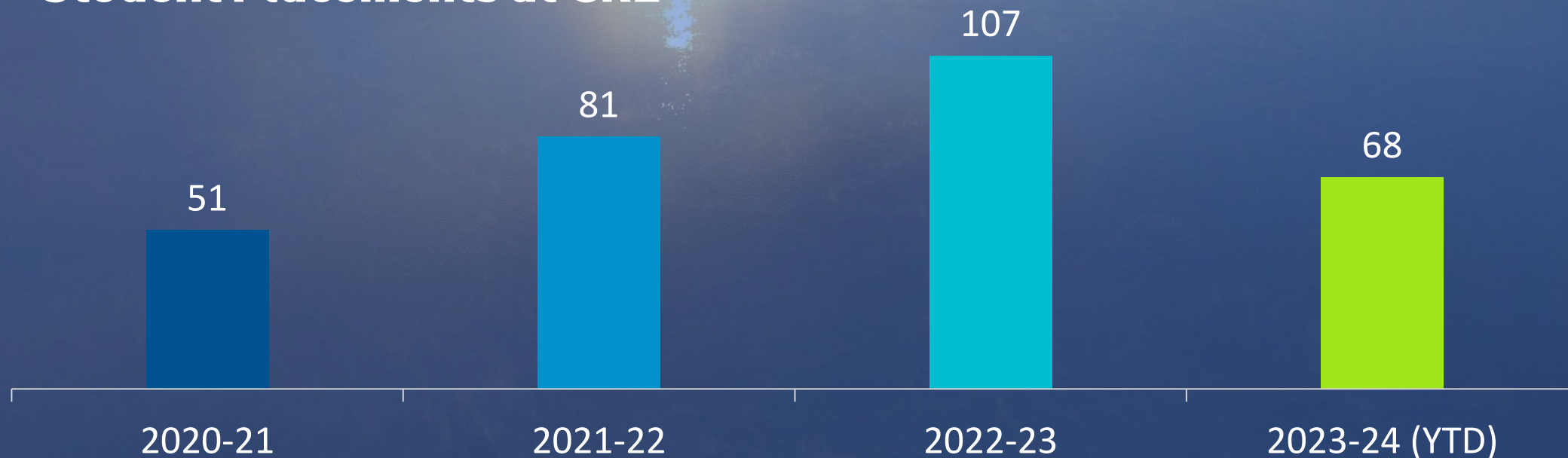
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**DEVELOPING THE FUTURE WORKFORCE  
FOR THE REGION, FOR CNL, AND FOR  
CANADA**

**307**

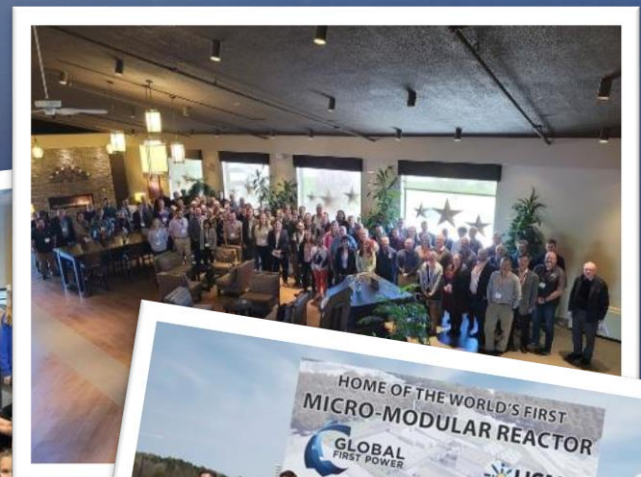
**STUDENTS AT  
CRL AS CO-OP  
AND TERM  
EMPLOYEES**

**Student Placements at CRL**



# A PROUD COMMUNITY PARTNER:

- Averaging 2 school tours each month
- Special Events: PEO, Science Fairs, etc
- CNL/CNEA Crowdfunding - \$150,000 invested in 2023
- STEM Education: Girl Guides, Kids Camps, In Class Visits
- Economic Development: OCNI Day, Supply Chain Meet & Greet, OV Economic Development Meetings
- Connected with school boards to enrich curricula



# Thank you / Merci

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