



Centre for Canadian Nuclear Sustainability

Pickering & Darlington
Community Advisory Committee

Carla Carmichael, Vice President
Nuclear Decommissioning Strategy

May 18, 2021

ONTARIO **POWER**
GENERATION



Centre for
Canadian Nuclear
Sustainability

Overview



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The Future of Pickering Generating Station

End of commercial operations

- The Province of Ontario is supporting a plan to end commercial operations in 2025, pending regulatory approval
- When commercial operations cease, fuel and water will be removed, and the station will be placed in a safe storage state, beginning the decommissioning process.

Decommissioning is a careful, multi-decade process with distinct phases, which include*:

1. Safe storage period starts: 3 years
2. All used fuel moved into dry storage: 10-15 years
3. All used fuel removed from site: 25 years
4. All facilities dismantled and site restored: 40 years

** Each date represented in the timeline is from the date of Pickering's end of commercial operations*



Schedule Opportunities

Improvements in innovation and technology

- As a responsible and conscientious utility, OPG must review its decommissioning strategy in light of industry trends, public and stakeholders expectations, and technological advances.
- OPG is always looking for ways to optimize some of our timelines given advances in technology.



What's New?



Sustaining the Clean Energy Lifecycle

CCNS Vision:

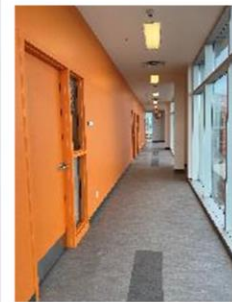
Nuclear technology is adopted as the sustainable energy source for future generations

CCNS Mission:

Bringing the industry together to invest in our environment, community and economy through the advancement of innovative and sustainable nuclear lifecycle solutions



Centre for Canadian Nuclear Sustainability



Partnerships, Industry and Innovation



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ENERGYSOLUTIONS
CANADA

CCNS AMBASSADOR:
ENERGYSOLUTIONS



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KINETRICS

CCNS AMBASSADOR:
KINETRICS



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SNC • LAVALIN

CCNS AMBASSADOR:
SNC-LAVALIN



Deloitte.

PROMATION
nuclear

framatome



AECOM



Canadian Nuclear
Laboratories
Laboratoires Nucléaires
Canadiens



Laurentis
Energy Partners



NUVIA

Alithya

HATCH

Worley



Westinghouse

AECON

FLUOR

BWXT

CALIAN

MODUS
STRATEGIC SOLUTIONS

CCNS INDUSTRY CATALYSTS



WiN
CANADA



OntarioTech
UNIVERSITY

DURHAM
COLLEGE
SUCCESS MATTERS



Clarington
Board of Trade and
Office of Economic Development

City of
PICKERING

Town of
Ajax
By the Lake



ORGANIZATION OF CANADIAN
NUCLEAR INDUSTRIES
OCNI
Clean Energy for a Low Carbon Economy

CANDU Owners Group Inc.
COG
"Excellence Through Collaboration"

NAYGN



CCNS COMMUNITY PARTNERS



Foundation Pillars

Environment

Sustainable Plans for safe, environmentally and socially responsible decommissioning



Economy

Advance projects resulting in **Economic Stimulus** and skilled job opportunities



Innovation in the Industry

Innovative Thought Leadership
Collaborative research and development with academia and vendors



Community

Broad outreach and inclusiveness
Community Involvement



Innovation in the Industry

- Close to 300 Innovative Idea Submissions
- Recycling used fuel from CANDU reactors
- Recycling heavy water
- Clean Energy Materials Sorting and Recycling facility



BRIGHTER WORLD



Economy

Strengthening the Economy

- OPG opens CCNS doors in the Durham Region in 2020
- Four partners have innovation space at the facility
- NPX has opened a new office in the Durham Region
- The CCNS recently contributed \$500,000 to Durham College for a campus expansion to house skilled trade's development and training.
- Collaborative study with the City of Pickering and Durham Region
- Collaboration Agreement with SNC-Lavalin, Canadian Nuclear Laboratories, CCNS





Environment

Enhancing OPG's leadership position in sustainable nuclear decommissioning



**“ our promise is to be
a catalyst for efficient,
economy-wide
decarbonization ”**

**A net-zero
carbon
company by
2040**

Having delivered the world's single largest climate action to date by closing our coal stations, OPG will continue to be a climate leader by investing in and implementing CO₂ reductions and offsets to achieve net-zero carbon emissions by 2040.



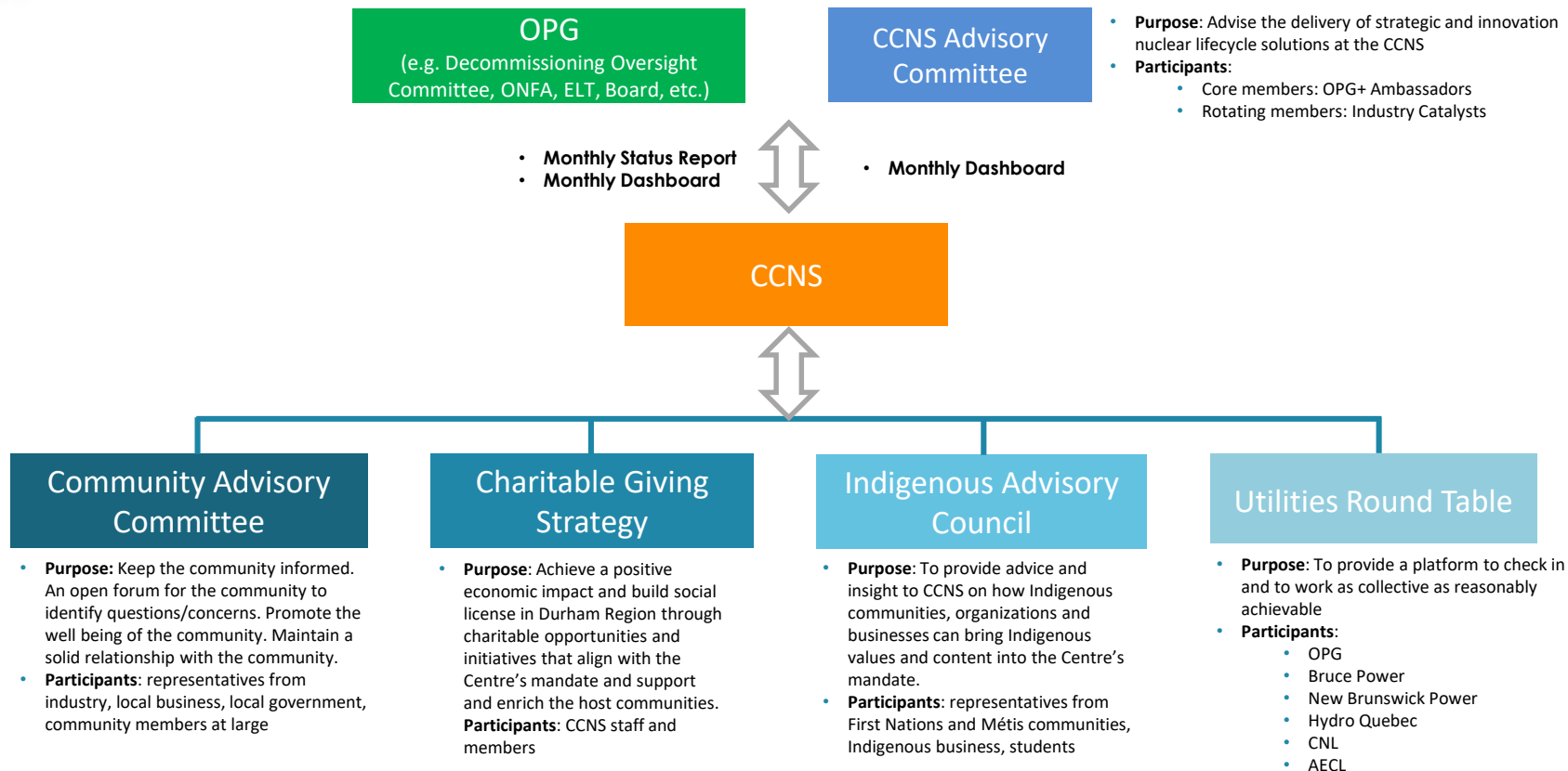
Community

Building strong and safe communities

- CCNS is proud to sponsor Youth Science Canada's Annual Canada-Wide Science Fair
- The CCNS has a charitable giving strategy
- We will work with the Pickering Community Advisory Council and our newly established Indigenous Advisory Council



Operations Structure





What's Next?

- New investments over the next year in areas of innovation, technical studies, analyses, and project management to continue to drive economic growth
- Engage and collaborate with the stakeholders, the community and Indigenous communities
- Share our story and build awareness of our plans as they continue to evolve



Thank You

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