



Durham's Nuclear Sector Strategy

Update for Durham Nuclear Health Committee – November 19, 2021

Agenda

- Purpose of strategy
- Process to date
- What we heard from public engagement
- Preview of strategy
- Path forward



Purpose of the strategy

Empowering our community by:

- Building understanding of nuclear energy
- Increasing our capacity to respond/participate
- Working with partners to seize opportunities
- Being prepared for an evolving future
- Taking a community-centred leadership role



Developing the Strategy

Guiding Principles

- Aligned
- Future-focused
- Community-centred
- Connected
- Respecting Indigenous rights and treaties

- Phase 1: Awareness
- Phase 2: Listening
- Phase 3: Integrating Lessons Learned



Listening: Community and Partner, Rights Holder & Stakeholder Engagement

Proposed Nuclear Strategy Objectives

Grow understanding of the nuclear sector among Regional Council, staff, and the community.

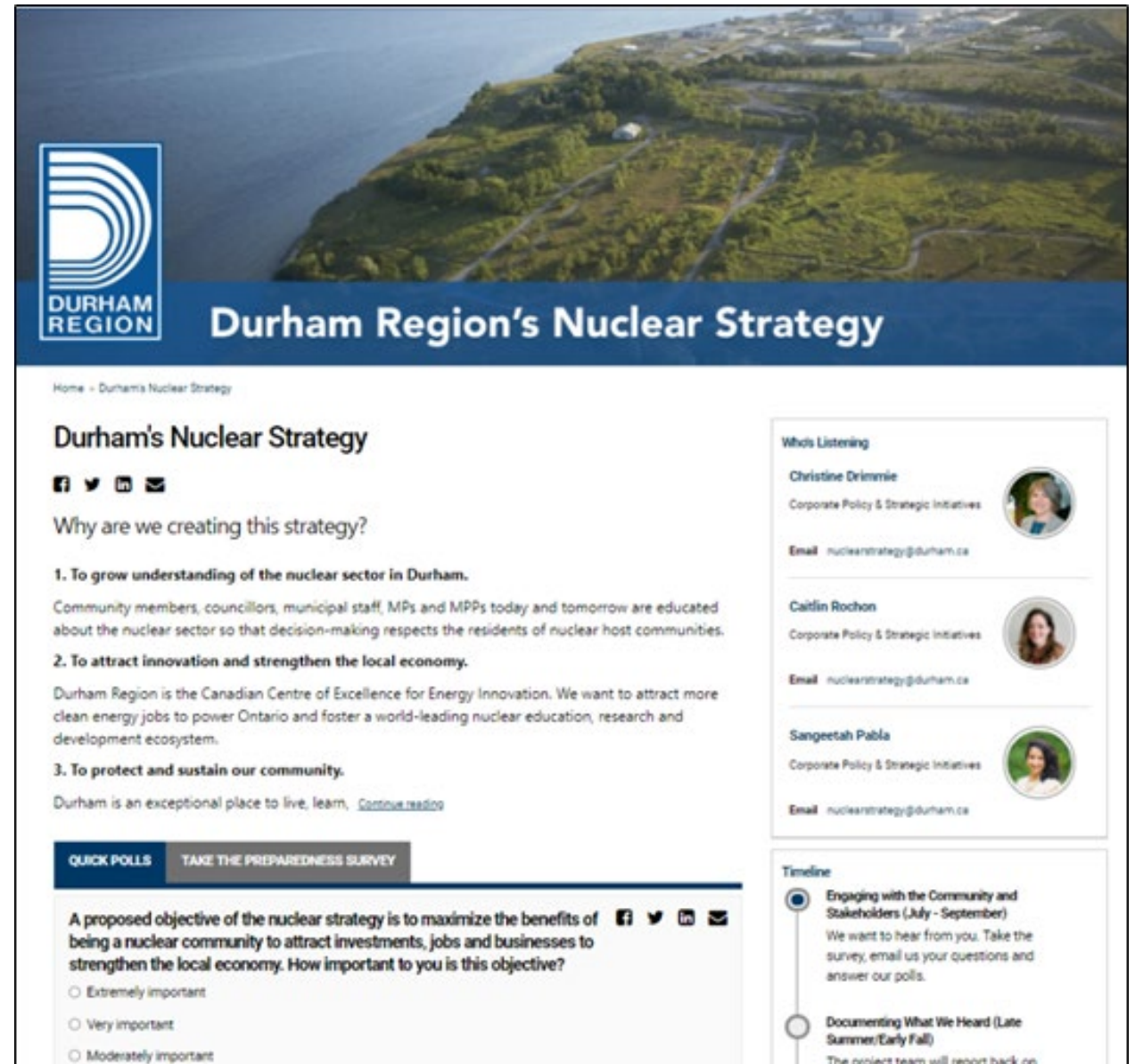
Build prosperity by maximizing the benefits of being a nuclear host community and Canada's premier centre of the nuclear industry and innovation.

Protect and sustain the community by addressing impacts and opportunities of being a nuclear host community.

Lead and develop partnerships within the nuclear sector to build leadership capacity and influence decision-making.

1) Community Engagement

- *Your Voice Durham* online platform for Durham residents
- Email invitation sent to diverse community groups and Regional advisory committees to encourage participation



The screenshot displays the 'Durham Region's Nuclear Strategy' website. At the top, there is a banner with the Durham Region logo and the title 'Durham Region's Nuclear Strategy'. Below the banner, the page content includes:

- Home - Durham's Nuclear Strategy**
- Durham's Nuclear Strategy** with social media icons for Facebook, Twitter, LinkedIn, and Email.
- Why are we creating this strategy?**
 - To grow understanding of the nuclear sector in Durham.** Community members, councillors, municipal staff, MPs and MPPs today and tomorrow are educated about the nuclear sector so that decision-making respects the residents of nuclear host communities.
 - To attract innovation and strengthen the local economy.** Durham Region is the Canadian Centre of Excellence for Energy Innovation. We want to attract more clean energy jobs to power Ontario and foster a world-leading nuclear education, research and development ecosystem.
 - To protect and sustain our community.** Durham is an exceptional place to live, learn, [continue reading](#)
- QUICK POLLS** TAKE THE PREPAREDNESS SURVEY
- A proposed objective of the nuclear strategy is to maximize the benefits of being a nuclear community to attract investments, jobs and businesses to strengthen the local economy. How important to you is this objective?**
 - Extremely important
 - Very important
 - Moderately important
- Who's Listening**
 - Christine Drimmie**, Corporate Policy & Strategic Initiatives, Email: nuclearstrategy@durham.ca
 - Caitlin Rochon**, Corporate Policy & Strategic Initiatives, Email: nuclearstrategy@durham.ca
 - Sangeetah Pabla**, Corporate Policy & Strategic Initiatives, Email: nuclearstrategy@durham.ca
- Timeline**
 - Engaging with the Community and Stakeholders (July - September)**
We want to hear from you. Take the survey, email us your questions and answer our polls.
 - Documenting What We Heard (Late Summer/Early Fall)**
The project team will report back on

2) Partner, Rights Holder & Stakeholder Engagement

Online survey sent to a targeted list (44 in total)

- 33 responses to survey
- Included a wide cross-section of partners, rights holders, and stakeholders
- 88% of respondents reported having a moderate or high level of awareness of nuclear activities/issues in Durham Region
- >90% supported the four proposed strategy objectives

Followed up with 7 small, virtual focus groups (24 participants)

What we Heard in Focus Groups:

- High support for development of nuclear strategy and the four proposed objectives
- Potential roles identified for Region:
 - Education – joint effort
 - Convening role
 - Advocacy and influence
 - Supporting economic development
 - Recognizing Indigenous history, rights and partnership opportunities
 - Aligning and partnering more with OPG

View the full Engagement Summary Report:

yourvoice.durham.ca/nuclear-strategy 



Preview of Strategy Content



Canada's Premier Nuclear Community

Who we are:

- Proud and experienced nuclear host jurisdiction
- Concentration of nuclear facilities, supply chain and academia
- Strong partnerships will continue to be vital

Where we are:

- Region plus eight area municipalities
- Michi Saagiig and Chippewa traditional territories

What exists here:

- Facility profiles

Facility Profiles

Pickering Nuclear
Generating Station

Pickering Waste
Management
Facility

Darlington Nuclear
Generating Station

Darlington Waste
Management
Facility

Darlington New
Nuclear Project

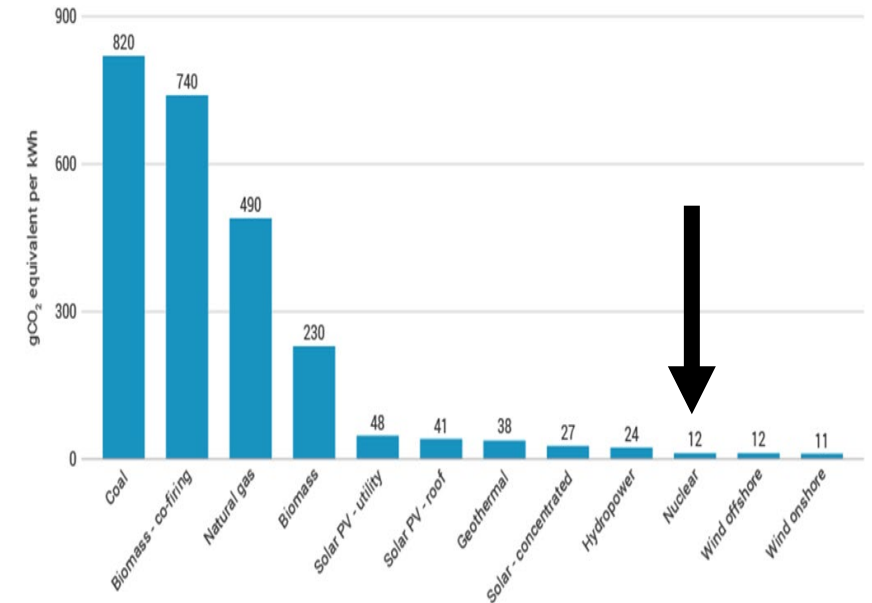
Port Granby Waste
Management
Facility

Pickering Nuclear Generating Station Facility Profile

- Units: 8 Canada Deuterium Uranium (CANDU) Pressurized Heavy Water Reactor (PHWR)
- Capacity: 3100 Megawatts
- In service: 1971-73 (Pickering A), 1983-86 (Pickering B)
- Refurbishment: 1997-2005
- Owned and operated by OPG, an agency of the Province of Ontario
- Currently licenced to operate until: 2024
- Employees: 2,700
- Decommissioning: Pickering A Units 2 and 3 were taken out of service in 2007-8, the remaining units are scheduled to be taken out of service in 2024 and 2025
- In 2020, 396,935 used fuel bundles were stored in cooling pools

Context for the Nuclear Strategy

- Region's Strategic Plan, Community Energy Plan, emissions targets
- Ontario's coal phase-out
- Strong safety record of nuclear
- GHG emissions and energy density vs. other energy sources
- Provincial/federal initiatives
- Valuable medical isotopes
- Used nuclear fuel today and NWMO's plans for a DGR





Powering the Future: Key Milestones for Durham Region in a Graphic

2021 – OPG selects technology for Canada’s first on-grid SMR at Darlington

2022 – The Port Granby Project is completed

Technology for isotope harvesting installed at DNGS

2024 – OPG begins engineering and construction for the Darlington SMR

2024 – PNGS reactors begin to be sequentially shut down

2025 – Durham Region’s corporate GHG emissions reduced to 20% below 2019 levels

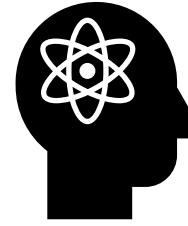
2028 – The SMR at Darlington enters into service

2030s - Construction of Canada’s used fuel DGR

2040s - By 2040, OPG will be a net-zero carbon company, DGR accepts used fuel

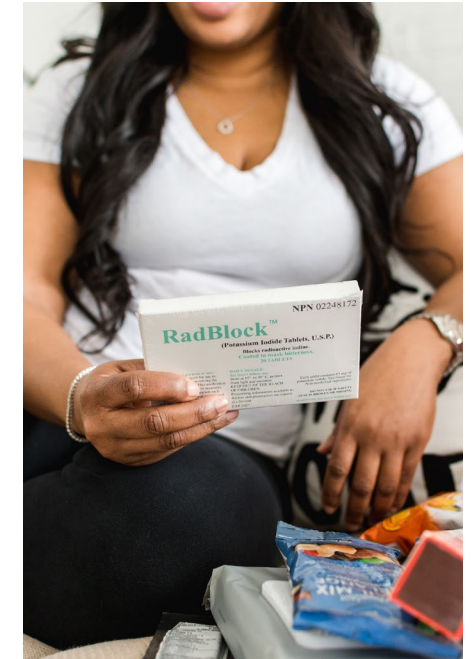
2050s - By 2050, Durham’s community emissions will be 100% below 2019 levels

Grow Understanding



Desired outcomes:

- Increased understanding by Durham Region Council, staff and community
- Improved intergenerational knowledge transfer
- Improved alignment and consistency among Regional staff communications
- Increased community engagement and participation



Maximize Prosperity

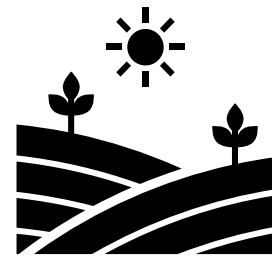


Desired outcomes:

- Increased investment, research and job creation
- Develop a strong, diverse talent pipeline
- Increased local manufacturing to support Canada's SMR technology development
- Develop reputation as a respected, innovative source of medical isotopes, the global centre of nuclear expertise



Sustain and Protect

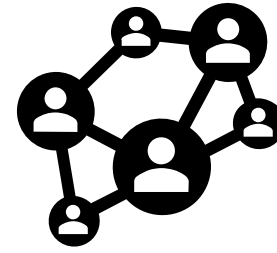


Desired outcomes:

- Financial arrangements that recognize the responsibilities of being a nuclear host community
- Increased capacity for the Region to anticipate and prepare for changes related to nuclear projects in Durham
- Minimize any adverse impacts of large nuclear projects, optimize benefits to community



Develop Partnerships



Desired outcomes:

- Increased knowledge sharing on the experience of being a nuclear host community
- Improved capacity to influence policy and decision making at the provincial and federal level
- Increased collaboration
- Improved communication, cooperation and alignment



Supports for Strategy Delivery:

- Governance – Nuclear Sector Working Group (staff)
- Implementation and financial plans
 - Communications plan developed to support strategy roll out
 - Advance actions via annual business planning and budget process
- Monitoring and Evaluation Plan
 - Develop metrics and indicators related to each action
 - Report annually beginning 2023, review in 2026
- Open, Accountable, Evolving
 - Public reporting of plans, results, evaluation
 - learn from experience and refocus as needed
- Conclusion
 - Strategy allows us to be prepared and proactive, extend our reach through partnerships, to influence change, manage uncertainty, seize opportunity

Next Steps

- Providing briefings on strategy, seeking comments
- Refining document based on feedback
- Seeking approval of strategy
 - Report and presentation at COW Dec. 15
 - At Regional Council on Dec. 22
- Working on strategy design suitable for posting on durham.ca
- Launch early in 2022



Questions, discussion