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Acknowledged and Deferred: Intervenor Influence in CNSC Licensing Decisions

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Executive Summary

Public participation is central to nuclear regulation in Canada. This report asks whether that participation actually influences Canadian Nuclear Safety Commission licensing decisions, or whether it mainly functions as a formal step in a process whose outcomes are already shaped by CNSC staff assessments and staged regulatory approval.

By studying how the CNSC dealt with three licensing cases, at Darlington, Pickering, and Point Lepreau, we show that public concerns rarely shape the final licensing outcome. Interventions are recorded, summarized, and acknowledged in Commission decisions. However, acknowledgement is not the same as influence. In practice, the CNSC often treats intervenor concerns as issues to be managed through future oversight rather than as reasons to delay, alter, or refuse licensing approval, but the public has no formal way of intervening in such future oversight activities.

This is most evident in the Darlington and Pickering cases. In Darlington, intervenors raised serious concerns about emergency planning, incomplete safety analysis, radioactive waste, reactor design maturity, climate change, external hazards, and the continued reliance on an earlier environmental assessment. The Commission acknowledged these concerns but still granted the licence to construct. Rather than requiring the issues to be resolved before approval, the CNSC deferred them to later licensing stages, future submissions, staff review, and regulatory hold points.

The Pickering case shows the same pattern in an even sharper way. Intervenors raised concerns about operating beyond design life, probabilistic safety assessment, large release risk, cumulative site risk, emergency preparedness, and the adequacy of the evidence before the Commission. Despite these concerns, the Commission allowed continued operation. Outstanding issues were allowed to be dealt with through future reporting and CNSC staff oversight, not through a refusal to proceed or a requirement that the concerns be resolved first.

Point Lepreau is the clearest example of intervenor concerns producing a measurable effect, but even there, the influence was procedural rather than substantive. Intervenors opposed NB Power's request for a 25-year licence and CNSC staff's recommendation of a 20-year licence, arguing that long licence terms would reduce public participation and weaken accountability. The Commission granted a shorter 10-year licence and required a mid-point public proceeding. However, it still does not show a comparable influence over technical safety requirements.

The core finding of this report is that CNSC public participation is stronger as a record-building mechanism than as a decision-shaping mechanism. Civil society interventions help identify unresolved risks, expose gaps in the evidence, and create a public record of concern. However, the CNSC rarely treats those concerns as decisive. Technical and safety concerns are usually absorbed into the existing licensing framework through deferral, scope limitation, hold points, or staff-level review. As a result, intervenors may be heard without being meaningfully considered.

This creates a serious accountability problem. Once an issue is moved from a public hearing into post-hearing CNSC staff oversight, it becomes difficult for the public to know what information was submitted, what standard was applied, whether the concern was resolved, and whether the intervenor's original warning had any effect. The process is open at the hearing stage, but much less transparent at the stage where unresolved issues are actually managed.

This report recommends that the CNSC strengthen the connection between public participation and regulatory outcomes. Key safety concerns raised during hearings should not be deferred without clear criteria, timelines, and public reporting. Records of Decision should explain whether major intervenor concerns are accepted, rejected, or deferred, and why. Hold points should identify the issues they are intended to resolve and make the basis for release publicly traceable. Public participation should also occur earlier in the licensing process, before key assumptions are already settled and when the CNSC makes decisions about lifting hold points.

Civil society interventions remain essential, but the current process limits their effect. The problem is not that intervenors are excluded. The problem is that they are included in a way that rarely changes the result. If public participation is to be meaningful, the CNSC must do more than allow intervenors to speak. It must show how their concerns are considered, weighed, and reflected in the decisions that follow.

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1. Introduction

1.1 Background

Canada's nuclear regulatory system relies on formal licensing decisions made by the Canadian Nuclear Safety Commission (CNSC), the federal authority responsible for regulating nuclear activities to protect health, safety, security, and the environment. A central feature of this regulatory framework is the use of public hearings, which allow civil society organizations, technical experts, and members of the public to participate in licensing decisions involving significant safety and environmental risks.

Civil society participation is intended to support transparency and accountability in nuclear regulation. Organizations such as the Canadian Environmental Law Association (CELA) routinely participate in CNSC hearings by reviewing technical documentation, identifying safety concerns, raising issues related to emergency preparedness, radioactive waste management, environmental protection, and long-term risk. These interventions introduce independent analysis into the regulatory record and provide an opportunity for external scrutiny of both proponent submissions and CNSC staff assessments.

Despite the presence of these participation mechanisms, the extent to which civil society interventions influence final regulatory decisions remains uncertain. Intervenor concerns are frequently acknowledged in hearing records and Commission decisions, yet such acknowledgement does not necessarily translate into measurable changes in licensing outcomes. In several cases, issues raised during hearings have been reassigned to future regulatory processes rather than resolved at the time of approval.

This report examines three major CNSC licensing cases involving Darlington, Pickering, and Point Lepreau. These cases were selected because they involve significant licensing decisions and substantial participation by civil society organizations. Together, they provide a basis for examining how intervenor concerns are recorded, interpreted, and reflected in final decisions, and whether participation functions as a mechanism of influence or primarily as a procedural requirement. Since this report draws on a large number of CNSC hearing materials, a bibliography with the full details of the decision documents, Commission Member Documents, and interventions discussed is included at the end.

1.2 Policy Problem

Despite formal mechanisms for public participation, this report demonstrates that civil society interventions are incorporated into the hearing record but do not meaningfully influence CNSC licensing outcomes. The CNSC licensing process demonstrates strong procedural transparency. Public hearings are conducted openly, written interventions are formally recorded, and Records of Decision regularly reference issues raised by intervenors. These features suggest a regulatory system designed to incorporate public input into complex technical decision-making.

However, in multiple licensing decisions, intervenor concerns are often acknowledged without resulting in measurable changes to regulatory outcomes. Issues raised during hearings are frequently deferred to later licensing stages, treated as outside the scope of the current decision, or responded to through CNSC claims of ongoing oversight, rather than through enforceable licence conditions that would allow the public to verify whether concerns are meaningfully resolved.

This gap between formal participation and measurable influence represents a central policy concern. If participation mechanisms do not meaningfully affect decision outcomes, public hearings risk functioning primarily as procedural exercises rather than as effective tools of regulatory accountability.

1.3 Research Question

This report is guided by the following primary research question:

Do interventions by the public and civil society make a difference to CNSC licensing decisions? If so, can we identify how, at what stages, and through what types of issues interventions influence regulatory outcomes?

To address this central question, the report examines several related sub-questions:

- What issues are included in Proponent and CNSC Staff Commission Member Documents, compared to those raised by intervenors?
- How are these issues treated in the Commission's Reasons for Decision?
- Do intervenor concerns influence the imposition of regulatory hold points?
- Are certain categories of issues more likely to receive regulatory attention than others?

These questions focus on measurable patterns of decision-making rather than participation alone. The analysis, therefore, evaluates not only whether intervenors are heard, but whether their concerns affect regulatory outcomes.

1.4 Hypothesis

This report proceeds on the hypothesis that certain categories of issues are more likely than others to influence Commission decisions, but that overall intervenor influence remains constrained by structural features of the CNSC licensing framework.

Technical safety concerns, including safety analysis completeness, emergency preparedness, and radioactive waste management, are expected to be acknowledged but frequently deferred to later licensing stages. In contrast, governance and procedural concerns, such as licence duration and review requirements, may be more likely to produce observable regulatory responses.

This expectation reflects the influence of key institutional features within the CNSC framework, including staged licensing, scope limitations, and reliance on CNSC staff

assessments as the primary source of technical judgment. These features shape how concerns are evaluated and often allow licensing decisions to proceed while unresolved issues are assigned to future regulatory processes.

By examining the Darlington, Pickering, and Point Lepreau cases, this report identifies recurring patterns in how intervenor concerns are treated and evaluates whether public participation functions as a mechanism of influence, a mechanism of oversight, or primarily as a mechanism of record building.

2. Background: The CNSC Licensing Process

2.1 The Canadian Nuclear Safety Commission and Its Mandate

The Canadian Nuclear Safety Commission (CNSC) is Canada's federal regulator responsible for overseeing the use of nuclear energy and materials to protect health, safety, security, and the environment. Established under the Nuclear Safety and Control Act, the CNSC regulates nuclear activities across the lifecycle of facilities, including construction, operation, and radioactive waste management. Its mandate ensures that Canada meets international obligations related to the peaceful use of nuclear technology.

In carrying out its responsibilities, the CNSC evaluates licence applications submitted by proponents such as Ontario Power Generation (OPG) and NB Power. CNSC staff conduct technical assessments of these applications and present their findings to the Commission through Commission Member Documents (CMDs). These documents provide the primary technical basis used by the Commission when making licensing decisions.

2.2 The Nuclear Licensing Process in Canada

Nuclear facilities in Canada are regulated through a staged licensing process that reflects the lifecycle of a nuclear project. While the specific process may vary depending on the type of facility, major licensing decisions typically include environmental assessment, licence to construct, and licence to operate stages.

At each stage, proponents must demonstrate compliance with regulatory requirements related to safety, environmental protection, and security. CNSC staff review submitted information and provide recommendations to the Commission through CMDs. The Commission then conducts public hearings before issuing a Record of Decision (RoD).

Licensing decisions are often accompanied by conditions or hold points that require the proponent to complete additional work before proceeding to later stages. These conditions commonly relate to safety analysis, environmental monitoring, or emergency preparedness. Compliance with these requirements is primarily verified through CNSC staff review, which means that the information used to assess and release hold points may not return to the Commission through a new public hearing process. This can make it difficult for intervenors and members of the public to determine what technical or safety information was submitted, what CNSC staff found satisfactory, and the basis on which hold point release decisions were made.

A defining feature of this process is staged decision-making. Rather than requiring all uncertainties to be resolved at once, issues may be addressed incrementally across licensing phases. While this structure provides flexibility, it also allows concerns raised during hearings to be deferred to future stages rather than resolved at the time of approval.

2.3 Role of Public and Civil Society Interventions

Public participation is a formal component of CNSC licensing hearings. Individuals, community groups, and non-governmental organizations, referred to as intervenors, are invited to submit written or oral interventions. These submissions allow civil society actors to introduce additional evidence, challenge technical conclusions, and raise concerns that may not be fully addressed in proponent or staff materials.

Intervenors commonly raise issues related to emergency planning, reactor safety, radioactive waste management, and environmental impacts. Organizations such as CELA play a recurring role in reviewing technical documentation and identifying areas of uncertainty or incomplete analysis.

Although the Commission is required to consider all interventions, the degree to which these submissions influence final decisions remains vague. Commission outcomes frequently rely on CNSC staff assessments as the primary basis for determining whether regulatory requirements have been met. As a result, intervenor critiques may be acknowledged but not incorporated into final decision outcomes.

2.4 Decision-Making and Public Participation Outcomes

Following public hearings, the Commission issues a Record of Decision outlining its conclusions and the rationale for granting, denying, or modifying a licence. These decisions summarize key issues considered during the hearing process, including those raised by intervenors.

In many cases, the Commission concludes that CNSC staff assessments provide sufficient assurance of safety and environmental protection. Intervenor concerns are therefore often acknowledged but shifted into licence conditions, continued oversight, hold points, or future licensing stages rather than producing immediate changes to approval decisions. This is significant because once concerns are moved into post-hearing staff oversight, the public may have limited ability to follow whether or how those concerns are ultimately resolved.

This pattern creates a gap between procedural participation and observable influence. While intervenor concerns are recorded and referenced, the reasoning behind how those concerns affect final decisions is not always clearly articulated. As a result, participation supports transparency in the process but does not consistently produce measurable changes in regulatory outcomes.

This reliance on staff assessments reinforces the central role of internal technical authority within the CNSC framework and limits the ability of external actors to alter decision outcomes, even when concerns are thoroughly supported by evidence.

3. Scope of Review

This report reviews three CNSC licensing cases involving Darlington, Pickering, and Point Lepreau. These cases were selected because they involve major licensing decisions, substantial participation by civil society intervenors, and sufficient publicly available documentation to allow comparison across regulatory stages. Each case represents a different licensing context, allowing the report to examine how intervenor concerns were addressed across construction, operational, and licence renewal decisions.

The review focuses on formal regulatory documents associated with each case, including CNSC Staff Commission Member Documents, intervenor submissions, and Records of Decision issued by the Commission. For the Darlington case, the review also considers the role of the environmental assessment framework, particularly where questions were raised regarding the applicability of earlier environmental approvals. Together, these materials make it possible to trace how specific issues were introduced, discussed, and resolved within the regulatory process.

Across the three cases, recurring areas of issue were examined, including emergency planning, safety analysis, radioactive waste management, environmental protection, and public participation. Particular attention was given to whether these issues were acknowledged in Commission decisions, deferred to later licensing stages, or addressed through procedural mechanisms such as hold points and licence conditions.

The purpose of this review is not only to identify whether intervenor concerns appear in the regulatory record, but to assess whether those concerns produced observable effects on decision-making. By comparing how similar issues were treated across multiple cases, the report identifies recurring patterns in how public participation operates within the CNSC licensing framework and whether intervenor input results in meaningful regulatory outcomes.

4. Case Study 1: Darlington Nuclear Generating Station

4.1 Project Overview

The Darlington New Nuclear Project involved an application by OPG for a licence to construct a small modular reactor (SMR) at the existing Darlington nuclear site in Ontario. The application was significant because it concerned a first-of-a-kind reactor design that had not yet been deployed in Canada or anywhere else in the world. This raised important regulatory questions regarding safety analysis, environmental assessment applicability, emergency preparedness, and whether the CNSC's staged licensing process was adequate for assessing unresolved issues associated with an unproven technology.

The CNSC conducted a public hearing process to evaluate the licence-to-construct applications. CNSC staff prepared technical assessments addressing reactor design, safety

systems, environmental protection, and emergency planning requirements. Civil society organizations, including CELA, participated as intervenors and raised concerns regarding the adequacy of safety analysis, the readiness of emergency planning measures, radioactive waste management responsibilities, and the continued reliance on earlier environmental assessment approvals.

These issues were not limited to technical design details but reflected broader concerns about the timing of regulatory approval and the treatment of unresolved risks within the staged licensing framework. Intervenor submissions emphasized that certain safety and environmental uncertainties remained outstanding at the time of the licence to construct decision.

The Commission ultimately approved the licence to construct while acknowledging the concerns raised during the hearing process. However, rather than resolving these issues at the time of approval, several concerns were deferred to future licensing stages or addressed through planned regulatory follow-up. This decision established the foundation for the issue-specific patterns examined in the following sections.

4.2 Emergency Planning

Emergency planning was a major issue raised during the Darlington licensing process and provides a clear example of how intervenor concerns were acknowledged but not incorporated into binding regulatory requirements at the licence to construct stage. CNSC staff stated that detailed nuclear emergency planning was not required during construction because no nuclear fuel would be present at the site. Instead, staff indicated that detailed emergency preparedness requirements, including evacuation time estimates, emergency planning zone sizing, and revisions to the Provincial Nuclear Emergency Response Plan, would be addressed at later stages of the licensing process.

The Record of Decision adopts the same staged approach. The Commission concluded that Ontario Power Generation had adequate emergency management and fire protection programs in place for construction activities and emphasized that a radiological emergency could not originate from the Darlington New Nuclear Project during this phase. Existing regional emergency infrastructure, including municipal and provincial emergency services, was identified as sufficient to support construction activities. At the same time, the Commission stated that final evacuation modelling and emergency planning zone development would be completed during future licensing applications, particularly before authorization to operate.

Intervenors challenged this staged treatment of emergency preparedness. CELA requested that the licence to construct not be issued until evacuation time estimates were updated using recent population data and the Provincial Nuclear Emergency Response Plan was revised. Northwatch and Ecojustice argued that emergency planning could not be meaningfully assessed while accident scenarios and reactor design information remained incomplete. Their broader argument was that emergency preparedness should be treated as an integral component of licensing rather than being deferred to later operational stages.

Despite these concerns, the Commission did not impose any licence conditions requiring updated evacuation modelling or completion of emergency planning revisions before construction approval. No regulatory hold points were specifically tied to emergency preparedness readiness. Instead, emergency planning requirements were deferred to future regulatory processes and later licensing stages.

This outcome reflects a pattern of procedural acknowledgement combined with deferral. Emergency planning was recognized as important and repeatedly referenced in the decision-making process, but it did not result in substantive changes to the licensing outcome. By defining emergency preparedness as phase-specific and postponing detailed evaluation to later stages, the Commission insulated the licence to construct decisions from intervenor demands for a more complete emergency planning record approval, reinforcing the role of staged licensing as a mechanism for managing unresolved risks.

4.3 Safety Analysis and Completeness of Safety

Safety analysis was also a central issue in the Darlington licensing materials and provides one of the clearest examples of the Commission's reliance on staged licensing. CNSC staff concluded that Ontario Power Generation had met regulatory requirements for a licence to construct while also noting that additional information would be required as the BWRX-300 safety analysis progressed. Staff described the safety case as iterative and identified several areas requiring further work, including probabilistic safety assessment uncertainty analysis, seismic and wind hazards, climate-related information, and broader hazard analysis.

The Record of Decision reflects the same approach. The Commission determined that the preliminary safety analysis contained sufficient detail to support construction activities and concluded that the proposed design could meet applicable safety goals at this stage. At the same time, the decision emphasized that the design and safety analysis would continue to evolve and that additional submissions would be required before regulatory hold points could be removed or future operating licences considered.

Intervenors directly challenged this staged approach. CELA requested that the licence to construct not be issued until the probabilistic safety assessment included full uncertainty, sensitivity, and importance analyses. Northwatch raised concerns about the maturity of the reactor design and the adequacy of accident modelling, while Ecojustice argued that phased licensing fragmented risk assessment and prevented a comprehensive evaluation of safety and environmental impacts. Additional intervenors identified unresolved accident scenarios, incomplete safety system information, and the deferral of essential technical evidence to later stages.

Despite these concerns, the Commission accepted CNSC staff's conclusion that the available information was sufficient to proceed with construction. Intervenor requests to delay licensing until the safety case was more complete were not adopted. Instead, unresolved safety questions were addressed through future submissions, staff review, and regulatory hold points. This outcome reflects procedural uptake rather than substantive change, as uncertainty was treated as an expected feature of the licensing process rather than a barrier to approval.

4.4 Waste Management and Decommissioning

Waste management provides one of the clearest examples of scope limitation through staged licensing in the Darlington record. CNSC staff defined the waste management safety and control area as covering waste-related programs during construction and preliminary decommissioning planning. Staff concluded that OPG had met regulatory requirements and that waste management and decommissioning plans would be updated as additional information became available. Additional hazardous waste information was required before removal of the first regulatory hold point, and licence conditions required the licensee to implement and maintain waste management and preliminary decommissioning programs.

The Record of Decision reflects the same framing. The Commission stated that no radioactive waste would be generated during the licence to construct phase and that construction waste would consist primarily of conventional materials such as excavated soil, rock, and non-nuclear hazardous substances. Long-term radioactive waste management was explicitly deferred to future licensing stages, particularly the licence to operate. The Commission therefore concluded that waste management arrangements were adequate for the construction phase.

CELA requested that the licence not be issued until SMR-specific radioactive waste plans were provided and objected to treating long-term waste management as outside the scope of the construction decision. Northwatch argued that the absence of defined waste pathways created uncertainty because waste generation is an inevitable consequence of construction decisions. Ecojustice framed waste management as a lifecycle issue, arguing that construction approval commits the project to future waste obligations. Ole Hendrickson raised specific concerns about the preliminary decommissioning plan, including the absence of a defined decommissioning strategy and uncertainty in cost and timeline estimates.

These concerns did not alter the licensing outcome. The Commission acknowledged waste management as relevant but treated long-term radioactive waste planning as outside the scope of the licence to construct. The result reflects scope exclusion rather than substantive uptake. While near-term construction waste was addressed through existing regulatory programs, long-term waste governance was deferred to future licensing stages.

4.5 Reactor Design, Shutdown Systems, and SMR Novelty

The Darlington materials show that public intervenors repeatedly emphasized the novelty of the BWRX-300 and characterized it as a first-of-a-kind reactor design. However, the CNSC did not treat this novelty as a reason to require a more complete design before granting a licence to construct. Rather, the CNSC framed design incompleteness as a normal and manageable feature of staged licensing, effectively treating unresolved safety and design details as acceptable at the construction stage so long as they could be deferred to future submissions, hold points, and CNSC staff oversight.

Specific concerns about reactor design maturity and shutdown system independence were raised. CELA requested that the licence not be issued unless two truly independent shutdown systems were demonstrated. Northwatch and Ecojustice raised broader concerns about approving

construction while key safety systems remained under development. Dr. Sunil Nijhawan argued that the design lacked several fundamental safety features, including independent shutdown systems, robust emergency core cooling capability, adequate containment volume, and reliable backup power, and recommended that construction not proceed until a more complete and independently reviewed design was available.

The Record of Decision did not adopt these requests as binding requirements. Shutdown system independence and other design concerns were treated as technical matters for continued review within the broader safety analysis framework, and no licence condition required full demonstration of design completeness before construction. This outcome reflects technical acknowledgement without binding uptake, as design novelty was recognized but did not alter the licensing threshold.

More broadly, SMR-specific risks were acknowledged but segmented across licensing stages rather than resolved before approval. Design uncertainties were treated as preliminary matters to be addressed through future submissions and regulatory oversight, reinforcing the role of staged licensing as a mechanism for managing uncertainty rather than requiring full technical resolution before construction.

4.6 Climate Change, External Hazards, and the Environmental Assessment Context

The Darlington case raises an additional and distinctive set of concerns related to the continued applicability of the project's 2011 environmental assessment and the treatment of climate change and external hazards within that framework. Together, these issues reveal a further dimension of the deferral pattern observed across the licensing record: rather than re-examining integrated risk as conditions changed, the regulatory process converted the EA's original cumulative function into a narrower retrospective exercise focused on whether earlier conclusions remained technically bounded.

The 2011 Joint Review Panel environmental assessment was conducted without a specific reactor technology selected. OPG relied on a plant parameter envelope designed to encompass multiple possible designs, and the Panel accepted that design-specific risks would be addressed through subsequent licensing. When the BWRX-300 was selected, the regulatory question therefore shifted from evaluating the project's environmental acceptability as a whole to determining whether the new technology fell within the bounds of conclusions already reached in 2011. This shift is not merely procedural, but substantive. Where the 2011 EA treated safety, proximity, emergency planning, and waste as interlinked and cumulative concerns to be assessed together, the 2023 applicability process fragmented these issues across separate CMDs, licensing documents, and future commitments, evaluating them on an issue-by-issue basis rather than cumulatively.

The consequences of this approach are most visible in the treatment of radioactive waste. CNSC staff acknowledged that the BWRX-300 generates a higher source term for alpha-emitting radionuclides than the technologies modelled in the 2011 EA. For an intermediate-level waste pool fire scenario, the estimated dose to workers and members of the public under the BWRX-300 is approximately ten times greater than the dose estimated for the equivalent scenario in the

original EA. Despite this significant deviation from EA assumptions, CNSC staff concluded that the EA's findings remained valid. The basis for this conclusion was not that the EA predictions still held, as they demonstrably did not for this scenario, but rather that the applicable regulatory dose limits continued to be met. In other words, exceedance of EA estimates was treated as acceptable so long as outcomes remained within regulatory thresholds. The environmental assessment shifted from a predictive baseline into a threshold-compliance instrument, measuring outcomes against dose criteria rather than the accuracy of original findings.

The 2011 EA also contains commitments that were not carried forward in any visible way into the 2023 review. The Joint Review Panel explicitly recommended that, before construction, the CNSC require OPG to evaluate the cumulative effect of a common-cause severe accident involving all nuclear reactors in the site study area. This recommendation directly addressed the risk implications of building a new reactor adjacent to the existing Darlington Nuclear Generating Station. In the 2023 applicability process and subsequent licensing record, this cumulative accident scenario was not resolved. Accidents at the neighbouring Darlington NGS were screened out of the BWRX-300 hazard analysis based on low probability, and multi-unit accident scenarios were not evaluated in the manner the JRP had contemplated. The original EA's precautionary framing of proximity risk was therefore quietly set aside, absorbed into the same boundedness logic that governed the rest of the applicability review.

CELA challenged OPG's position that climate change had no nuclear safety implications, arguing that extreme weather events could affect infrastructure reliability, emergency response capacity, and evacuation feasibility in ways that design-phase assumptions might not capture. Northwatch linked climate-related risks to gaps in emergency planning. Ecojustice characterized climate change as a system-level safety concern rather than a discrete engineering variable. The Nuclear Transparency Project argued more broadly that the fragmentation of environmental review across licensing stages had left key questions about radionuclide emissions, air quality modelling, thermal impacts on Lake Ontario, and liquid effluent discharges unresolved, and that intervenors could not meaningfully assess project impacts without those studies being completed.

None of these concerns produced a substantive regulatory response. Climate risks were addressed within existing design assumptions, and no independent climate risk assessment or emergency stress-testing requirement was imposed before approval. The boundedness determination proceeded on the basis that the 2011 EA's evaluation criteria remained applicable to the BWRX-300, even where specific parameters had changed materially.

The environmental assessment's original function as a comprehensive, integrated review of cumulative environmental and safety risk was replaced by a retrospective compliance routine that asked only whether earlier conclusions could still be technically defended. In doing so, it reproduced at the EA level the same structural feature observed throughout the licensing record: the displacement of unresolved risk from the current decision to later stages, future oversight, or ongoing regulatory management, without requiring that the underlying questions be answered before authorization to proceed.

4.7 Hold Points and the Structure of Regulatory Control

The Darlington Record of Decision includes three key regulatory hold points tied to installation of the reactor building foundation, installation of the reactor pressure vessel, and fuel-out commissioning. These hold points prevent progression to major technical milestones until additional design, safety, emergency planning, and operational requirements are accepted. However, the decision itself does not determine when these hold points will be satisfied. Their verification and release are delegated to CNSC staff through subsequent technical review.

This structure is significant for understanding the intervenor influence. Hold points demonstrate that unresolved technical and safety issues remain at the time of licensing and that the regulatory framework formally recognizes those uncertainties. However, the release of hold points occurs through staff-level review rather than through a return to the Commission for a new public decision. As a result, even when intervenor concerns overlap with the subject matter of hold points, the authority to resolve those concerns remains primarily administrative.

A recent correspondence exchange between CELA and the CNSC regarding the Darlington New Nuclear Project illustrates the difficulty of following this process after the hearing. CELA requested the licence as issued following the hearing, the Licence Conditions Handbook, more specific descriptions of the regulatory hold point preconditions that CNSC staff must be satisfied with before release, and any documentation regarding hold point releases to date. CNSC staff responded that removal of a regulatory hold point requires OPG to demonstrate that all commitments related to the hold point have been completed to the satisfaction of CNSC staff, with details documented under licence condition 15.3 of the Licence Conditions Handbook. However, the response did not clearly identify the specific technical or safety information required, what had been submitted or found satisfactory, or the basis on which hold point release decisions would be made. This illustrates how difficult it can be for members of the public and intervenors to follow unresolved issues once they move from the public hearing record into post-hearing staff oversight.

This reinforces a broader pattern observed throughout the Darlington case: civil society interventions may influence the sequencing of information and regulatory requirements, but they rarely reshape the core licensing authorization itself. Where unresolved issues are moved into hold points, the public may have limited ability to verify whether concerns raised during the hearing are later resolved in a meaningful or transparent way.

4.8 Findings from the Darlington Case

The Darlington New Nuclear Project provides strong evidence that civil society participation is formally incorporated into the CNSC process, but weak evidence that it meaningfully changes the outcome of major licensing decisions. Intervenor concerns were clearly present throughout the record. Emergency planning, probabilistic safety assessment maturity, radioactive waste management, shutdown system independence, climate risk, and the continued applicability of the environmental assessment were all repeatedly raised by intervenors and explicitly acknowledged by CNSC staff and the Commission. On its face, this suggests a process that is open and responsive.

However, the record shows a different pattern. Acknowledgement did not translate into a meaningful constraint on the licence to construct. None of the intervenor requests resulted in denial of the licence, a new site-specific licence condition directly tied to an intervenor's request, or a regulatory hold point explicitly attributed to public intervention. Where influence is visible, it appears mainly through procedural uptake, deferral, or exclusion. In practice, intervenor concerns were recognized, but they were rarely allowed to disrupt the licensing trajectory.

Darlington also shows that this outcome is not accidental. It is built into the structure of staged licensing itself. Concerns about safety, emergency preparedness, waste, and environmental uncertainty were not rejected outright. Instead, they were absorbed into a regulatory framework that treats incompleteness as acceptable at the licence-to-construct stage, fragments interconnected risks across multiple future processes and assigns responsibility for unresolved issues to later staff review. This allows the Commission to proceed with approval while postponing the moment at which difficult questions must actually be resolved.

For that reason, Darlington supports the report's central hypothesis in a particularly clear way. Public interventions do make it into the record, but they shape timing and process far more than they shape substantive outcomes. The problem is not that intervenors are ignored. The problem is that their concerns can be acknowledged, documented, and even treated as legitimate, while still being displaced to later stages where they no longer have the same capacity to constrain the original decision. In this sense, Darlington reveals a licensing system that appears participatory but remains structurally resistant to meaningful public influence at the point of authorization.

5. Case Study 2: Pickering Nuclear Generating Station

5.1 Project Overview

The Pickering Nuclear Generating Station case provides a contrasting example of how civil society interventions interact with CNSC decision-making. Unlike Darlington, which concerns a new reactor at the licence-to-construct stage, Pickering involves an aging facility and a discrete regulatory decision: whether to remove a hold point — Licence Condition 16.3 — that restricted operation beyond 210,000 equivalent full-power hours, the assumed design lifetime for CANDU pressure tubes.

Ontario Power Generation sought approval to continue operating Pickering beyond this limit without refurbishment, relying on aging management programs, monitoring, and ongoing safety assessments. The Commission had originally imposed the hold point during the 2013 licence renewal hearing, explicitly declining to delegate its removal to CNSC staff and requiring instead that the matter return to a public proceeding. Before the hold point could be removed, the Commission directed OPG to submit a revised Pickering A PSA compliant with Regulatory Standard S-294, updated PSAs for both Pickering A and B incorporating Fukushima Action Plan enhancements, and either a whole-site PSA or a methodology for developing one. These requirements reflected the Commission's own recognition that the existing safety evidence was insufficient to proceed without further scrutiny.

The May 2014 hearing, therefore, presented a specific and bounded question with immediate operational consequences. Intervenor largely argued that the hold point should remain in place until key safety and emergency planning concerns were resolved. The Commission ultimately removed the hold point, allowing continued reactor operation beyond the established design lifetime.

5.2 Reactor Aging and Operation Beyond Design Life

A central issue raised across multiple interventions was the extension of reactor operation beyond the original design lifetime. Intervenor argued that the 210,000 equivalent full-power hour limit had historically functioned as a firm safety benchmark for CANDU reactors and that exceeding it without refurbishment represented a significant departure from established regulatory practice.

The Canadian Coalition for Nuclear Responsibility emphasized that reactors reaching this limit had historically been shut down or refurbished and argued that continued operation without replacing critical components such as pressure tubes and feeder pipes increased the probability of component failure. The International Institute of Concern for Public Health similarly argued that extending operation beyond the designed limits of pressure tubes reduced safety margins and introduced additional risk.

Intervenor framed these concerns not only as technical issues but also as questions of regulatory philosophy. They argued that exceeding established design limits should trigger a precautionary approach, particularly given the potentially severe consequences of reactor failure and Pickering's proximity to the Greater Toronto Area.

Despite these concerns, the Commission accepted CNSC staff's conclusion that continued operation would not pose an undue risk to public health, safety, or the environment. The decision relied on evidence of inspection programs, fuel channel monitoring, aging management strategies, and ongoing operational safety assessments. This outcome demonstrates that even where intervenor challenged a core regulatory threshold such as design lifetime, the Commission relied on its judgment that ongoing management programs would be sufficient, even though historical operating limits would be exceeded.

5.3 Safety Analysis and Probabilistic Risk Assessment

Safety analysis, particularly probabilistic safety assessment, was one of the most contested issues in the 2014 Pickering hearing, and the Record of Decision reveals a more complicated picture than a simple staff endorsement.

CNSC staff confirmed that OPG had submitted updated PSAs for both Pickering A and B, incorporating Fukushima Action Plan enhancements and meeting the requirements of S-294. For Pickering B, the results were unambiguous: both core damage frequency and large release frequency met safety goal limits across all hazard categories, individually and in aggregation. For Pickering A, however, the picture was more qualified. Staff confirmed that CDF and LRF met safety goal limits when calculated individually for internal and external events, but the

aggregated LRF calculated by simple summation for Pickering A was noted to be slightly above the OPG safety goal limit, primarily due to conservative assumptions in the Fire PSA. Staff also acknowledged that not all Fukushima Action Plan enhancements had yet been credited in the PSA due to a lack of validated models, and that further reductions were expected to be achieved only once those enhancements were fully incorporated. This process was not expected to conclude for approximately two more years.

Several intervenors challenged these results directly. Submissions argued that PSA results showed Pickering A exceeded both core damage frequency and large release frequency limits under fully S-294-compliant analyses, and that conservative bounding assumptions were being dismissed rather than applied. Greenpeace Canada argued that the probability of a large accidental radioactive release causing offsite damage remained unacceptably high. Intervenors also raised the absence of an independent third-party review of the PSA results, and the fact that summary reports had been published only one week before the public hearing, giving the public and intervenors insufficient time to assess their contents. The Commission acknowledged the timing concern and granted intervenors an additional week to submit supplementary comments, a procedural concession that reflected the legitimacy of the concern, even if it did not alter the substantive outcome.

Despite these acknowledged limitations, the Commission accepted CNSC staff's conclusion that the PSA evidence was sufficient to support removal of the hold point. The Commission did not require the Pickering A LRF issue to be resolved before proceeding, nor did it require the outstanding Fukushima enhancements to be credited in the PSA before authorizing continued operation. Instead, it directed OPG to submit a detailed risk improvement plan and required annual reporting on the status of improvements. These were ongoing oversight measures rather than preconditions for the decision itself.

5.4 Large Release Risk, Cumulative Risk, and External Hazards

The question of cumulative, whole-site risk was explicitly before the Commission in 2014, having been raised as a Commission-directed requirement at the 2013 licence renewal. The Commission had required OPG to develop either a whole-site PSA or a methodology for one before the hold point could be removed.

OPG responded by providing a methodology for a whole-site PSA rather than a completed assessment. CNSC staff acknowledged that the detailed review of the submitted PSAs would not be completed until June 30, 2015, more than a year after the hold point removal decision. The Commission accepted this, directing OPG to continue developing the whole-site PSA methodology and requiring annual updates on its progress, but not conditioning the hold point removal on the completion of that work.

Intervenors, particularly Greenpeace Canada, challenged the per-unit basis of risk assessment directly, arguing that evaluating reactors individually understated the total risk from the entire Pickering site and created an effective regulatory loophole that allowed the multi-reactor facility to appear safer than a proper aggregation of site-wide risk would show.

The Commission raised the loophole argument directly with CNSC staff during the hearing. Staff responded that they were not aware of any such loophole, suggested the intervenor had taken a staff comment on PSA calculation methodology out of context, and reiterated that safety goals are designed on a per-unit basis precisely to ensure that individual unit designs are as safe as possible. The Commission accepted this response without requiring further elaboration or independent verification of the claim. No additional analysis of site-wide aggregated risk was required as a condition of hold-point removal.

This exchange is revealing for two reasons. First, it shows the Commission actively defending the per-unit methodology rather than treating cumulative risk as an open regulatory question, despite having itself directed OPG to develop a whole-site PSA at the previous hearing. Second, it illustrates how intervenor arguments that directly mirror prior Commission concerns can be reframed, once staff has responded, as matters already considered and resolved. The concern did not disappear from the record. It was answered, and the answer was accepted.

The result was that the whole-site risk assessment remained incomplete at the time of the decision, the per-unit basis of safety goal evaluation was preserved, and intervenor arguments about cumulative risk were recorded but did not alter the regulatory outcome. The Commission directed continued development of the whole-site PSA methodology and required annual progress updates, prospective oversight measures that acknowledged the gap without treating it as a barrier to authorization.

5.5 Emergency Planning and Public Protection

Emergency planning was another major area of concern, particularly given Pickering's location near one of the most densely populated urban regions in Canada. Intervenors argued that evacuation planning is inadequate, that existing emergency plans are not designed for severe or multi-unit accident scenarios, and that public health protection measures are insufficient for a reactor operating beyond its design lifetime.

CELA emphasized that Pickering no longer meets modern siting expectations due to its proximity to a large population centre and argued that evacuation under severe accident conditions may not be feasible. They further argued that emergency preparedness does not adequately account for Fukushima-scale events and recommended that the hold point not be removed until emergency readiness is demonstrably improved. Additional recommendations included expanded emergency planning zones and the broader pre-distribution of potassium iodide tablets to nearby populations.

The International Institute of Concern for Public Health similarly argued that evacuation and emergency response plans are inadequate given the surrounding population density. These concerns were framed as central to the licensing decision, not as secondary operational matters, because emergency preparedness directly determines whether large-scale public protection is realistically achievable.

Despite these concerns, the Commission proceeded with the removal of the hold point. There is no indication that emergency planning deficiencies resulted in new licence conditions

tied specifically to continued operation, nor that improvements in evacuation readiness were required before approval. The outcome suggests that, as in the Darlington case, emergency planning concerns were acknowledged but not treated as determinative at the decision stage.

5.6 Regulatory Standards, Evidence, and Precaution

Several intervenors argued that Ontario Power Generation had not met the regulatory requirements necessary for hold-point removal. Greenpeace Canada asserted that OPG had failed to submit a required action plan to reduce risk below safety limits and therefore had not fulfilled the Commission's conditions. Other submissions similarly argued that the evidentiary basis supporting continued operation was insufficient, noting that key safety studies were incomplete and that important analyses had not been provided at the time of the decision.

Concerns were also raised about regulatory independence, transparency, and the role of CNSC staff. Some intervenors argued that CNSC staff appeared to support the licensee's safety case rather than critically evaluate it and called for greater independent scrutiny by the Commission itself. Others noted that certain safety studies were deferred for submission to CNSC staff without public review, raising concerns that key evidence was being assessed outside the visible hearing process. These arguments framed regulatory transparency and evidentiary sufficiency as central to the legitimacy of the decision.

A related set of interventions focused on the broader question of precaution and justification. Several submissions argued that continued operation beyond design life was not necessary and, therefore, exposed the public to avoidable risk. These arguments emphasized that when safety limits are uncertain or contested, a precautionary approach should apply. Some intervenors framed this position as a legal obligation under the Nuclear Safety and Control Act, arguing that the CNSC has a responsibility to require risk reduction or closure where safety margins are exceeded.

Despite these challenges, the Commission accepted CNSC staff's assessment that continued operation would not pose an undue risk to public health, safety, or the environment. There is no indication that the Commission required additional independent review, strengthened evidence standards, or adopted precautionary restrictions as conditions of approval. As in the Darlington case, procedural and normative challenges to the adequacy of the evidence were acknowledged but did not result in changes to the final regulatory outcome.

5.7 Findings from the Pickering Case

The 2014 Pickering decision strengthens the patterns observed in the Darlington case while also revealing a distinctive feature of hold-point decisions: the tension between the Commission's own prior requirements and its willingness to accept partial satisfaction of those requirements as a basis for proceeding.

The Commission had explicitly refused to delegate hold-point removal to CNSC staff in 2013, requiring a public proceeding and setting out specific evidentiary conditions. By May 2014, several of those conditions had been met, but others remained outstanding. Specifically,

the aggregated Pickering A LRF slightly exceeded safety targets, outstanding Fukushima enhancements had not yet been credited in the PSA, and the whole-site PSA remained a methodology rather than a completed assessment. The Commission proceeded nonetheless, directing future reporting and risk improvement planning rather than requiring resolution before authorization.

Intervenor concerns on PSA completeness, large release risk, cumulative site risk, emergency planning, and the adequacy of the evidentiary basis were acknowledged and recorded but did not result in the hold point being maintained, new preconditions being imposed, or safety thresholds being revised. The Commission's response was to require ongoing monitoring, annual reporting, and continued work on the whole-site PSA, all of which were conditions of continued oversight rather than conditions of approval.

The pattern of influence is therefore more constrained in Pickering than even in Darlington. Whereas Darlington demonstrates deferral of intervenor concerns to future licensing stages, Pickering demonstrates something closer to conditional acceptance. The Commission moved forward despite identified gaps, relying on prospective improvements and staff oversight to address outstanding issues. In this sense, Pickering reveals the limits of intervention influence most sharply at precisely the moment when that influence might be expected to matter most, a discrete, time-sensitive decision with immediate operational consequences.

6. Case Study 3: Point Lepreau

6.1 Project Overview

The Point Lepreau Nuclear Generating Station case reinforces the broader pattern observed in the Darlington and Pickering cases. Although the central issue differed, focusing primarily on the length of the operating licence and its implications for public participation, accountability, and future regulatory oversight, the case similarly shows that civil society interventions had limited influence on the final licensing outcome.

In 2022, New Brunswick Power (NB Power) applied to renew the operating licence for Point Lepreau for a period of 25 years. CNSC staff supported licence renewal but recommended a shorter 20-year term. Intervenors, however, overwhelmingly opposed long licence periods and argued that extended licence terms would reduce opportunities for public engagement and weaken accountability. The Commission ultimately rejected both the 25-year request and the 20-year staff recommendation, instead granting a 10-year licence with a required mid-point public proceeding. This makes Point Lepreau the clearest example in this report of intervenor input being reflected in the final decision.

6.2 Licence length, Public Participation, and Future Developments

Licence length was the central issue in the Point Lepreau hearing. NB Power framed its 25-year request as a matter of stability, alignment with the remaining life of the facility, and consistency with international practice. CNSC staff similarly argued that effective regulatory oversight would continue regardless of licence duration.

Across submissions, long licence terms were treated not as neutral administrative choices but as decisions with direct consequences for public participation and accountability. Several groups argued that shorter licences would preserve regular hearing opportunities, allow changing conditions to be revisited, and maintain meaningful Commission oversight. The Canadian Nuclear Workers' Council, the Nuclear Transparency Project, Canadian Coalition for Nuclear Responsibility, EOS Eco-Energy, and others all linked shorter licence terms to continued public engagement.

CELA and the Coalition for Responsible Energy Development in New Brunswick added a further dimension by arguing that long licence terms were inappropriate given future uncertainty at the site, particularly planned small modular reactor development and fuel reprocessing proposals. They argued that these future developments could not be cleanly separated from the existing licensing basis and recommended that the licence include a reopening trigger if SMR licensing moved forward. More broadly, intervenors repeatedly connected shorter licence terms to regulatory flexibility, public accountability, and the need to revisit decisions as conditions changed.

6.3 Indigenous Participation and Intergenerational Accountability

A distinctive feature of the Point Lepreau case was the explicit framing of licence length as an issue of Indigenous participation and intergenerational accountability. The Passamaquoddy Recognition Group Inc. (PRGI) opposed a long licence term and recommended a three-year licence, grounding that position in Wabanaki legal principles and the importance of regularly revisiting decisions affecting land and communities over time. The PRGI's submission distilled this position with striking directness: "Fourteen Thousand Years says '3 Year License'", invoking the duration of Passamaquoddy presence on the land as the frame within which a 25-year regulatory closure should be understood. From that perspective, a generation-long licence was not a neutral administrative choice but a decision to silence Indigenous voices for a period that, measured against the depth of that relationship to the land, was anything but short.

This intervention reframed licence duration as more than an administrative matter. It raised the concern that a long licence would limit the participation of future generations and foreclose opportunities to revisit regulatory decisions in a meaningful way. The Commission engaged with this directly during the hearing, asking how a 20- or 25-year licence would promote reconciliation. CNSC staff maintained that licence length did not itself determine progress toward reconciliation. The PRGI representative pushed back, noting that the group had not been part of the decision-making process that led to the request for a 25-year licence, and that such a term would represent losing the voice of a generation in the discussion.

The Commission's response acknowledged the force of this concern. Its decision explicitly stated that an ongoing dialogue involving licensees, CNSC staff, the Commission, and Indigenous Nations and communities was essential to further reconciliation and to build and maintain trust. In granting a 10-year licence with a required mid-point public proceeding, the Commission directly linked its decision to the need to preserve opportunities for Indigenous Nations and communities to be heard. This makes Point Lepreau unusual within the broader case

record, as it is one of the few instances where the Commission explicitly connects an intervenor's framing, including an Indigenous governance framing, to the structure of its final decision.

6.4 Commission Response and Procedural Uptake

The Commission's decision reflects a clear, though limited, uptake of intervenor concerns. Although it accepted that NB Power maintained mature programs and adequate performance, it rejected both the 25-year request and the 20-year staff recommendation. Instead, it issued a 10-year licence aligned with the 10-year periodic safety review interval.

Most importantly, the Record of Decision explicitly linked this outcome to the concerns raised by intervenors. The Commission stated that maintaining opportunities for intervenors to voice their concerns was necessary to sustain dialogue with the public and Indigenous Nations and communities. It also required a mid-point public proceeding in 2027 to ensure additional participation during the licence term.

This is a significant departure from the patterns observed in Darlington and Pickering. Rather than deferring concerns or treating them as outside the scope of the decision, the Commission incorporated them directly into the procedural structure of the licence. Licence duration and the mid-term hearing became mechanisms for preserving oversight and participation.

6.5 Findings from the Point Lepreau Case

The Point Lepreau case provides the clearest example in this report of intervenor influence affecting a CNSC outcome. Unlike in Darlington and Pickering, where intervenor concerns were largely deferred, excluded, or acknowledged without changing the result, Point Lepreau shows direct procedural uptake. Intervenor concerns about licence length, accountability, future uncertainty, and public participation were reflected in both the shortened licence term and the requirement for a mid-point public hearing.

At the same time, the influence observed here remained limited in scope. It did not alter technical safety standards, impose new engineering requirements, or change substantive operating conditions. Instead, it affected the structure of oversight. Civil society interventions appear to be the most effective when they target governance and process rather than technical sufficiency alone.

Point Lepreau, therefore, strengthens the broader pattern emerging across the cases. Intervenors can influence CNSC decisions, but that influence is more likely to appear in procedural design than in substantive licensing constraints. In this case, the Commission responded to concerns about public participation and accountability by restructuring the licence. Even so, the change remained procedural rather than technical.

7. Cross-Case Analysis: The Role and Limits of Intervenor Influence in CNSC Decision-Making

7.1 Overview

Across the Darlington, Pickering, and Point Lepreau cases, a consistent pattern emerges regarding the role of civil society interventions, particularly those advanced by CELA, in CNSC decision-making. Intervenor concerns are consistently recorded and acknowledged, but their influence on final licensing outcomes is uneven and highly constrained.

The clearest cross-case finding is that intervenor influence is predominantly procedural rather than substantive. Intervenor influence is able to shape how issues are discussed, when they are revisited, and how regulatory processes are structured. They are far less successful, however, in altering core licensing outcomes, technical determinations, or binding safety requirements.

7.2 Acknowledgement Without Substantive Uptake

In all three cases, CELA's concerns are explicitly recognized within the Commission's reasoning. Issues raised by CELA, including emergency planning, safety analysis completeness, waste management, and public participation, appear consistently in staff documents and Records of Decision. However, this acknowledgement rarely translates into binding regulatory outcomes.

In Darlington, CELA raised concerns about the incompleteness of the probabilistic safety assessment, the adequacy of emergency planning at the licence to construct stage, radioactive waste management, and the continued applicability of the earlier environmental assessment. These concerns were explicitly referenced in the Record of Decision and treated as relevant to regulatory oversight. However, they were deferred to future licensing stages, were not tied to new licence conditions, and were not used to delay or constrain the licence to construct.

In Pickering, CELA's intervention focused heavily on emergency planning inadequacy, evacuation feasibility in a densely populated region, and the lack of preparation for severe or multi-unit accidents. These concerns were framed as fundamental public safety issues and directly linked to the decision on whether to remove the hold point. Despite this, the Commission accepted CNSC staff's assessment, removed the hold point, and did not impose new conditions tied to emergency preparedness.

Across both cases, CELA's concerns are clearly visible in the record and acknowledged as legitimate subjects of regulatory consideration, but they do not alter the core decision outcome. This establishes a consistent pattern of acknowledgement without substantive uptake.

7.3 Structural Limits on Intervenor Influence

The Darlington and Pickering cases show that the limited impact of intervenor participation is not simply a matter of individual decisions. It reflects structural features of the CNSC licensing framework itself.

One of the clearest constraints is staged licensing. In Darlington, major issues raised by CELA were repeatedly deferred. Safety analysis was directed to future submissions and hold points, emergency planning was postponed to later licensing stages, and radioactive waste management was treated as outside the scope of the construction decision. In Pickering, intervenors similarly argued that safety studies were incomplete and that the evidence base was insufficient to justify continued operation beyond the original design lifetime. Even so, the Commission accepted that further analysis and oversight could continue after the decision had already been made.

A related constraint is the narrowing of issues through scope limitation. In Darlington, radioactive waste management and long-term environmental risks were segmented into future processes rather than treated as integral to the construction decision. In Pickering, cumulative site risk, emergency planning deficiencies, and broader precautionary concerns did not become decision-driving factors. Intervenor submissions often took a lifecycle or systems-level view, linking construction to long-term waste, safety analysis to emergency preparedness, and site conditions to cumulative risk. In contrast, CNSC decision-making narrowed these concerns to the specific stage or issue under review.

A related pattern is that environmental impacts, particularly those affecting aquatic ecosystems and fisheries, appear more readily translated into immediate regulatory treatment through monitoring, mitigation, and follow-up requirements. By contrast, public safety and accident-risk concerns raised by intervenors are more frequently deferred to later licensing stages under the staged regulatory framework. This does not necessarily mean that the CNSC formally prioritizes fisheries over public safety. Rather, it suggests that environmental effects are often easier to manage through discrete regulatory tools, while broader safety concerns are absorbed into future submissions, staff review, hold points, or later licensing decisions.

The Commission's reliance on CNSC staff as the primary source of technical authority further limits the force of intervenor challenges. In both Darlington and Pickering, intervenor critiques of safety analysis and risk assessment were considered and summarized but not independently reassessed in a way that reopened the underlying technical conclusions. Staff determinations of adequacy functioned as the threshold for decision-making. This created an asymmetry in which intervenors could challenge the sufficiency of evidence, but the Commission ultimately deferred to staff expertise rather than revisiting core technical judgments.

Taken together, these features show that intervenor influence is constrained not only by the outcome of individual hearings but by a regulatory structure that enables deferral, narrows the scope of relevant issues, and anchors final decisions in internal technical assessments.

7.4 Where Influence Is Visible: Procedural Outcomes

The Point Lepreau case demonstrates that intervenor influence is not absent, but that it is concentrated in specific areas. In that case, CELA and other intervenors opposed long licence terms, raised concerns about reduced public participation and accountability, and linked licence length to future uncertainty, including possible SMR development at the site.

The Commission explicitly referenced intervenor concerns, rejected both the proponent's and CNSC staff's recommended licence lengths, imposed a shorter 10-year licence, and required a mid-term public hearing. This represents procedural uptake with measurable impact.

At the same time, the nature of that influence is important. It affected when and how decisions would be revisited, not what technical or safety standards would be applied. Point Lepreau, therefore, provides the clearest example in this report of meaningful influence, but it remains influence over process rather than substance.

7.5 Overall Findings

Across the three cases, intervenors had a clear but constrained impact on CNSC decision-making. Their submissions shaped the regulatory record, required the Commission and CNSC staff to respond to unresolved concerns, and influenced how issues were documented, deferred, or revisited. However, intervenors rarely changed the core licensing outcome. In Darlington, concerns about emergency planning, safety analysis, waste management, design maturity, and environmental assessment applicability were acknowledged but did not prevent the licence to construct from being granted. In Pickering, concerns about probabilistic safety assessment completeness, large release risk, cumulative site risk, operation beyond design life, and emergency preparedness did not prevent the hold point from being removed.

Point Lepreau provides the clearest exception. In that case, intervenor concerns about licence length, public participation, Indigenous engagement, future uncertainty, and regulatory accountability were reflected in the Commission's decision to issue a shorter 10-year licence and require a mid-point public proceeding. This shows that intervenors can influence CNSC outcomes, but that influence is more likely to appear in governance and procedural design than in technical safety determinations.

Overall, the cross-case evidence suggests four main findings. First, intervenor influence is consistent but constrained: concerns are regularly included in the record and acknowledged in Commission reasoning, but they do not usually alter approval outcomes. Second, the dominant form of influence is procedural rather than substantive, appearing through deferral, reporting requirements, review mechanisms, or hearing opportunities. Third, substantive influence remains limited, particularly where intervenors challenge CNSC staff's technical conclusions about safety, risk, or regulatory adequacy. Fourth, governance issues offer the strongest avenue for impact because they allow intervenors to frame concerns around accountability, transparency, and continued public oversight rather than technical sufficiency alone.

8. Policy Implications

8.1 Overview

The Darlington, Pickering, and Point Lepreau cases show that the CNSC licensing process formally incorporates public participation, but the substantive impact of intervenor input remains limited and uneven. Intervenor concerns are consistently acknowledged in Records of Decision, yet they rarely translate into binding licence conditions, altered outcomes, or revised

safety requirements. This has important implications for the transparency, effectiveness, and legitimacy of nuclear regulation in Canada.

8.2 Transparency in Nuclear Regulation

One of the clearest implications of this analysis is the gap between formal transparency and substantive transparency. Across all three cases, the CNSC process is procedurally open: intervenor submissions are placed on the record, hearings are publicly conducted, and Records of Decision reference concerns raised during the process. However, the reasoning by which those concerns influence outcomes is often unclear.

In both Darlington and Pickering, intervenor issues were acknowledged but not clearly resolved. Decisions proceeded despite identified uncertainties, and the rationale for rejecting, narrowing, or deferring intervenor concerns was not always explicitly articulated. As a result, participation is visible, but its practical impact is difficult to trace.

For organizations such as CELA, this limits the ability to assess whether interventions meaningfully shaped decisions, to understand how evidence was weighed relative to CNSC staff assessments, and to evaluate the consistency of regulatory reasoning across cases. Point Lepreau provides a partial exception, because the Commission explicitly linked intervenor concerns to licence length and the imposition of a mid-term public proceeding. Even there, however, the influence remained procedural rather than technical.

These cases suggest that while the CNSC process is open, it is not fully transparent in its decision logic, particularly in showing how intervenor evidence is incorporated, narrowed, or rejected.

8.3 Public Participation

The cases also highlight structural limits in how public participation operates within the CNSC licensing framework. Intervenors are able to raise complex technical and governance concerns, introduce evidence into the record, and appear directly before the Commission. However, their influence is constrained by recurring features of the regulatory process.

First, participation often occurs after key technical assessments have already been developed by CNSC staff. Intervenors therefore respond to pre-existing safety conclusions, defined project scopes, and staged licensing structures rather than shaping the foundational assumptions of the decision itself.

Second, staged licensing allows the Commission to defer intervenor concerns to future phases. In Darlington and Pickering, issues such as safety analysis, emergency planning, and waste management were repeatedly treated as matters for later stages, future oversight, or staff review. This reduced the immediate effect of participation even where the concerns raised were substantive and technically grounded.

Third, even when intervenor concerns are acknowledged, they are rarely tied directly to licence conditions, approval thresholds, or decision reversals. Point Lepreau shows that

participation can influence procedural aspects of oversight, such as licence duration and review timing, but this remains the exception rather than the norm.

The result is that public participation often functions more as a mechanism for input and record-building than as a mechanism for direct decision influence.

8.4 Regulatory Accountability

The findings also raise significant concerns about regulatory accountability. In all three cases, the Commission relied heavily on CNSC staff assessments as the basis for decision-making. While this reflects the technical nature of nuclear regulation, it also means that staff conclusions largely define the boundaries of the decision, while intervenor challenges to those conclusions are rarely independently tested in a way that alters the outcome.

At the same time, issue deferral, scope limitation, and non-binding acknowledgement allow concerns to be recognized without being resolved. This creates two related accountability problems. The first is diffusion of responsibility. When concerns are deferred to later phases or ongoing oversight, it becomes more difficult to determine when they will be addressed, how they will be evaluated, and whether they will affect future decisions. The second is the absence of a strong feedback loop. There is no consistent requirement for the CNSC to demonstrate how intervenor concerns were incorporated, explain why specific recommendations were not adopted, or track how deferred issues are eventually resolved. Point Lepreau partially addressed this through the requirement for a mid-term public proceeding, but that remains an exception and does not extend to technical or safety-related issues.

9. Policy Recommendations

Based on the findings of this analysis, the following recommendations are intended to strengthen public participation, improve transparency in CNSC decision-making, and enhance regulatory accountability within the existing licensing framework.

Recommendation 1

The CNSC should not grant licences where key safety concerns raised during hearings remain unresolved, particularly where those concerns relate to emergency planning, safety analysis completeness, reactor design maturity, waste management, or accident risk. Where such issues are central to the case of safety, they should be resolved before approval or attached to clear, enforceable pre-approval conditions that must be satisfied before the licence takes effect.

Recommendation 2

The CNSC should provide explicit and traceable responses to intervenor submissions in its Records of Decision by clearly identifying the major issues raised, stating whether each concern was accepted, rejected, or deferred, and explaining why, so that the relationship between public participation and the final decision can be meaningfully assessed.

Recommendation 3

The CNSC should ensure that hold points and licence conditions explicitly identify the issues they are intended to address, including where those issues were raised during public hearings. Each hold point should include measurable criteria for how and when the issue will be considered resolved, and the CNSC should make publicly available the information, analysis, and rationale used to assess and release the hold point.

Recommendation 4

The CNSC should expand public participation so that it occurs earlier and across multiple stages of the licensing process, including before key technical assumptions are finalized, and should incorporate additional review opportunities where important issues are likely to be deferred across licensing stages.

Recommendation 5

The CNSC should use licence length more strategically as a tool of accountability by avoiding excessively long licence terms where significant uncertainty, future site changes, or unresolved governance concerns exist, and by incorporating scheduled mid-term public proceedings where continued public oversight is warranted.

These recommendations would strengthen transparency, improve the effectiveness of public participation, and make CNSC decision-making more accountable to the concerns raised during licensing hearings.

10. Conclusion

10.1 Summary of Findings

This report examined the extent to which intervenor submissions influence CNSC licensing decisions across three cases: Darlington, Pickering, and Point Lepreau.

The analysis finds that intervenor input is consistently incorporated into the record and acknowledged in Records of Decision. However, its effect on final regulatory outcomes is limited and uneven. In both Darlington and Pickering, CELA raised substantive concerns related to emergency planning, safety analysis, and waste management. While these concerns were recognized by the Commission, they were not translated into binding licence conditions and did not alter the approval decisions. Instead, they were frequently deferred to future licensing stages or treated as outside the scope of the decision under review.

Point Lepreau provides a partial exception. In that case, concerns raised by CELA and other intervenors regarding licence length, public participation, and regulatory accountability were explicitly reflected in the Commission's decision. The Commission rejected longer licence terms, issued a 10-year licence, and required a mid-term public proceeding. However, this influence remained procedural and did not extend to technical or safety-related requirements.

Overall, the findings show a consistent pattern: intervenor influence is most visible in procedural outcomes, such as licence structure and review mechanisms, but remains limited in substantive areas, including safety standards, risk thresholds, and core licensing decisions.

10.2 Limitations

This report focuses on three CNSC licensing decisions and therefore provides a targeted analysis rather than a comprehensive review of all CNSC regulatory activity. While the selected cases offer meaningful variation by covering new reactor construction, life extension, and licence renewal, they may not capture the full range of regulatory practices across different facility types or contexts.

The analysis is also limited to publicly available documents, including Records of Decision, staff materials, and intervenor submissions. It does not capture internal deliberations, informal engagement between CNSC staff and licensees, or other decision-making dynamics that fall outside the public record.

In addition, the report centers on CELA and similar civil society intervenors. While this provides a focused perspective on public-interest participation, it does not assess the influence of other actors, such as industry stakeholders, Indigenous governments, or technical experts, whose roles may differ in both form and impact.

10.3 Implications for Nuclear Governance

The findings carry important implications for nuclear governance in Canada, particularly in relation to transparency, public participation, and regulatory accountability.

First, the gap between acknowledgement and outcome suggests that current processes do not fully translate public participation into regulatory influence. Hearings and submissions provide opportunities for engagement, but their effect on decisions, especially in technical and safety domains, remains limited.

Second, the reliance on staged licensing and issue deferral reduces the ability of intervenors to influence decisions at critical points. Concerns raised during hearings can be postponed without clear timelines or mechanisms for resolution, weakening the connection between participation and accountability.

Third, the consistent reliance on CNSC staff assessments as the basis for decision-making limits the role of external scrutiny. While technical expertise is essential in nuclear regulation, the absence of clear mechanisms to challenge or independently test staff conclusions constrains the effectiveness of intervenor participation.

At the same time, the Point Lepreau case demonstrates that change is possible within the existing framework. Where issues are framed in terms of governance, accountability, and participation, intervenor input can shape regulatory outcomes, particularly in areas where the Commission retains procedural discretion.

Taken together, these findings suggest that strengthening nuclear governance does not require reducing public participation, but making it more effective. This means improving transparency in decision-making, ensuring that intervenor concerns are clearly addressed, and creating stronger links between public input and regulatory outcomes.

For CELA, the report highlights both the value and the limits of current intervention strategies. Participation remains essential, but greater impact may depend on targeting procedural leverage points, linking technical concerns to regulatory conditions, and advocating for reforms that strengthen accountability within the licensing process.

Appendices

Appendix A - Case Study Overview Table

Facility	Decision Type	Key Issue	Final Outcome
Darlington New Nuclear Project	Licence to Construct	SMR Design and safety completeness	License granted; issues deferred
Pickering Nuclear Generating Station	Hold-point Removal	Operation beyond design life	Hold point removed
Point Lepreau Nuclear Generating Station	Licence Renewal	Licence length	10-year license issued

Appendix B - Key Documents Reviewed

Darlington New Nuclear Project (DNNP)

CNSC Hearing and Staff Documents

- **CMD 24-H3-2A** — CNSC Staff Supplemental Information
- **CMD 24-H3-B** — CNSC Staff Information
- **CMD 24-H3-1** — Application Materials
- **CMD 24-H3** — CNSC Staff Report
- **CMD 24-H3-1A** — Supplemental Application Information
- **CMD 24-H3-1B** — Additional Supporting Materials
- **CMD 24-H3-Q** — Questions from Commission Panel Members
- **CMD 24-H3.2** — Supplementary Staff Information
- **Record of Decision — Licence to Construct: OPG DNNP BWRX-300**

- **CMD 24-H2** — Related Supporting Documentation

Written Intervenor Submissions

- **CMD 24-H3-36** — Ole Hendrickson
- **CMD 24-H3-38** — Ecojustice Working Group
- **CMD 24-H3-39** — Dr. Sunil Nijhawan
- **CMD 24-H3-58** — Northwatch
- **CMD 24-H3-67** — Canadian Coalition for Nuclear Responsibility & Prolet Inc.
- **CMD 24-H3-68** — Nuclear Transparency Project
- **DNNP LTC** — Canadian Environmental Law Association Submission
- **PMD 11-P1.164** — Lake Ontario Waterkeeper Submission

Environmental Assessment Materials

- **Darlington Project Review (2011)** — Joint Review Panel Environmental Assessment
- **Joint Review Panel Environmental Assessment (2011)** — Final Report
- **2023 Submission — Comments on DNNP Environmental Assessment Applicability to BWRX-300 Technology** — Canadian Environmental Law Association

Pickering Nuclear Generating Station

CNSC Records of Decision

- **Record of Proceedings, Including Record of Decision** — May 7, 2014
- **Record of Proceedings, Including Record of Decision** — December 22, 2014
- **Record of Decision** — Application to Renew the Nuclear Power Reactor Operating Licence for the Pickering Nuclear Generating Station
- **Record of Decision, DEC 20-H100** — April 9, 2020
- **Record of Decision, DEC 22-H107** — November 24, 2022

Written Intervenor Submissions

- **CMD 14-H2.31** — Canadian Environmental Law Association
- **CMD 14-H2.53** — Canadian Coalition for Nuclear Responsibility
- **CMD 14-H2.36** — New Nuclear Free Solutions
- **CMD 14-H2.47** — Greenpeace
- **CMD 14-H2.41** — International Institute of Concern for Public Health

Proponent and Supporting Documentation

- **CD# P-CORR-00531-23980** — Ontario Power Generation Correspondence

Additional Supporting Materials

- **Evaluating Environmental Protection and Emergency Preparedness at the Pickering Nuclear Generating Station (Ref. 2018-H-03) — Canadian Environmental Law Association**

Point Lepreau Nuclear Generating Station

CNSC Records of Decision

- **Record of Decision, DEC 22-H2 — Licence Renewal for the Point Lepreau Nuclear Generating Station**
- **Summary Record of Decision, DEC 22-H2**

Written Intervenor Submissions

- **CMD 22-H2-5 — Leap4wards**
- **CMD 22-H2-23 — EOS Eco-Energy Inc.**
- **CMD 22-H2-179 — Canadian Nuclear Workers' Council**
- **CMD 22-H2-219 — Nuclear Transparency Project**
- **CMD 22-H2-228 — Canadian Coalition for Nuclear Responsibility**
- **CMD 22-H2-244 — Passamaquoddy Recognition Group Inc.**
- **Joint Intervention — Coalition for Responsible Energy Development in New Brunswick and Canadian Environmental Law Association**

Appendix C: Darlington Environmental Assessment Applicability

2011 EA vs 2023 EA

Issue	2011 EA	2023 EA Applicability	Pattern
Reactor technology	No specific technology selected; Plant Parameter Envelope used	BWRX-300 is assessed as bounded by the old EA	Retrospective validation
Proximity	Treated as a risk amplifier and cumulative site issue	Treated as a manageable site condition	Risk normalized
Emergency planning	Public protection and evacuation were EA-	Treated as a future/ provincial/ licensing	Deferral

	level concerns	issue	
Waste	Long-term waste and used fuel are addressed as EA issues	Waste effects assessed through regulatory dose criteria	Narrowed Scope

Appendix D: Environmental and Aquatic Issue Assessments

Issue	Lake Ontario Waterkeeper Concern	Why it Matters
Lake Ontario as a drinking water source	Lake is a public health and ecological resource	Shows environmental/public health framing
Lake infilling	Up to 40 hectares of lake infilling, shoreline alteration, and habitat loss	Direct fisheries/aquatic habitat concern
Cooling water	Once-through cooling causes entrainment, impingement, thermal discharge, and contaminants	Strong evidence for the aquatic impact category
Radiological and chemical emissions	Lack of clear information on contaminants, limits, and monitoring	Supports the transparency/environmental monitoring theme
EA adequacy	Mitigation measures have not sufficiently demonstrated	Supports broader critique of environmental assessment
Need and alternatives	Alternatives not adequately assessed	Shows broader public-interest framing