

**REVISING OUR PATH FORWARD: A PUBLIC DISCUSSION PAPER ABOUT SOLID  
WASTE REGULATION IN NOVA SCOTIA:  
RESPONSE AND COMMENTARY**

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This document responds to the invitation of the Department of the Environment to comment on changes that it proposes to make to the Solid Waste-Resource Management Regulations, made under Section 102 of the *Environment Act*.

### Summary

In summary:

1. We support the principle that the companies designing and manufacturing products should take some responsibility for the management of those products through extended producer responsibility programs. EPR programs encourage companies to produce more environmentally friendly products. We have suggested an expansion of EPR programs to end-of-life marine supplies and fishing gear and litter.
2. We support the banning of more products from landfills and incineration, including fluorescent light bulbs because of mercury content. Like any regulation, it is crucial that these regulations are enforced. A benefit of this approach is that new industries will develop to productively manage these items, but only if those industries can rely on a secure source of materials through their effective removal from disposal.
3. We do not support dropping the requirement that municipalities develop regional plans. The provincial waste disposal target of 300 kg waste/per person requires regional coordination and effort by both levels of government, and simply providing for regional planning to be optional is an inadequate basis for moving forward in this regard.
4. We support the inclusion of off-road-vehicle tires in the recycling program, as proposed by the Department of the Environment (DoE).
5. We do not support the use of incineration or other thermal technologies for the treatment of waste resources in Nova Scotia at this time. The waste management hierarchy reflects the most appropriate policy approach to management of solid wastes and efforts should be made to optimize the institutional and financial frameworks in support of waste reduction, reuse and recycling before condoning the application of less-preferred thermal treatment technologies. The EPR measures proposed by DoE will - if implemented - achieve progress in optimizing these frameworks. Accordingly, thermal treatment of waste resources should be considered only after EPR frameworks have been optimized.
6. Communities, environmental groups and the general public have played a significant role in shaping Nova Scotia's solid waste-resource regulations. We would encourage the provincial

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7. Department of the Environment to continue to engage with these stakeholders. A successful solid waste-resource system depends on public support.
  8. We believe that the Department of the Environment should legally define the terms “waste reduction”, “reuse”, “recycle”, “recovery” and “disposal”.
  9. We believe that the Department of the Environment should make explicit the economic benefits that may flow from the implementation of the proposed regulatory changes.

### **Commentary**

The commentary below follows the format of the Department’s document.

### **Proposed Changes to Nova Scotia’s Solid Waste Resource Management Regulations: Product Stewardship/Extended Producer Responsibility**

Clarity of Purpose The notion of product stewardship reflects that accountability for management of end-of-life products should be linked to the supply-consumption chain associated with those products, and not left simply to the municipal sector. Extended producer responsibility (EPR) is one model for achieving this, and others exist, including the consumer-financed beverage container program operated by the Resource Recovery Fund Board.

Currently, producers have largely unfettered ability to produce whatever they choose without regard to the management of products at the end of their life. EPR has emerged over the past decade as the single most effective approach to bring about positive change in this regard: Where producers must pay the cost of management of end-of-life products, they are more inclined to design products that reflect the principles of waste reduction, reuse and recycling over simple disposal. Other forms of “product stewardship” cannot achieve this benefit. Accordingly, provincial waste resources policy should be clear that all products that are in future managed within a “product stewardship” framework will be managed specifically in accordance with the principles of EPR.

Policy Context Extended producer responsibility (EPR) will bring many benefits to Nova Scotia over the long term, including the creation of jobs and an enhanced position as a global leader in the waste-resource sector. However, the central purpose of EPR should be articulated in the document: to link the design of products with their end-of-life management, and in this way influence product design to facilitate end-of-life management in support of a sustainable and vibrant economy. This will ensure that the policy context for EPR is clear, and that the purpose of EPR is not simply to transfer costs to the private sector.

Strengthening of Specific EPR Proposals The proposals regarding product stewardship and EPR will be strengthened through ensuring that the following are addressed through, specifically, EPR management frameworks:

1. *List of Products to be Covered* In addition to the list of products that is identified, the following should be added:
  - Marine supplies and fishing gear, and particularly supplies/gear that may be manufactured from plastics. It is not an over-statement to assert that piles of washed up plastic marine

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supplies and fishing gear on our beaches has - in some cases - reached alarming proportions, notwithstanding improvements in other cases, and this very certainly has negative consequences on our tourism industry as well as our environment. We know, as well, that plastic debris in the marine environment has become a priority issue at the international level; not all of this is related to marine supplies and fishing gear, but these items comprise a large percentage of the total debris on Nova Scotia beaches, as visits to some of our beaches will attest. EPR applied to marine supplies and fishing gear that are purchased in Nova Scotia will be a pro-active measure to address this issue and will result in creation of partnerships and commitment of resources to solving this problem that would not otherwise be possible.

- Litter. This is not a “traditional” EPR category. However, notwithstanding years of public education, litter is a continuing issue in Nova Scotia. It is time to hold accountable those whose products litter our province. It is not sufficient to focus solely on “consumer education” - there will always be a minority who simply will not respond to these messages and whose actions have a disproportionately negative impact on the rest of society since the litter of a few has consequences for many. This is particularly the case for our tourism sector, where the litter of a few has consequences for the sector as a whole. EPR applied to litter would collectively consider as producers the companies whose products contribute most greatly to litter. As with conventional EPR sectors, the “producers” that comprise the “litter sector” would collectively develop and implement a litter abatement strategy with quantifiable, independently verifiable and time-bound objectives. This approach does not preclude companies that are part of the “litter sector” from participation in EPR as members of another EPR sector (e.g. “packaging”). This will achieve a level of coordination to litter abatement that surpasses other approaches. The introduction of accountabilities at this level will attract new resources (human and technical, as well as financial) and a renewed commitment to address this issue.
- All electronic devices that are not currently regulated. The product stewardship/EPR proposals do not include an extension to electronic devices that are not currently regulated. However, there are no technical reasons to limit EPR for electronic devices to simply those that are already covered, particularly considering that devices change rapidly and the need to change the regulation to specify different devices as they are introduced is both uncertain and time-consuming. The principle should be, therefore, that all electronic devices—stationary and portable—should be subject to EPR.

2. *Ensuring Good Practice:* A practical issue with many EPR programs is that they may rely on out-of-province stakeholders for their viability: markets for recyclable materials, for example, may not be located in Nova Scotia, or even in Canada. Many items - such as fluorescent light bulbs - may contain hazardous materials such that the item must be properly handled, transported and processed. In some cases, the participation of stakeholders who are outside the purview of Nova Scotia—or Canada—may result in situations that reflect poorly on Nova Scotia; for example, plastics that are separated for recycling in Nova Scotia may end up being burned for fuel in inadequately regulated facilities in another country as a result of unmonitored and uncoordinated export. The electronics industry has taken steps to create an audit system

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through which it is possible to certify that end-purchasers of end-of-life materials are in fact utilizing the materials in a responsible way. The updated regulations should require that each EPR system reflects “best practices”, including an effective mechanism for ensuring that regulated products and materials are managed in appropriate ways at all stages of their end-of-life management, including stages that take place outside Nova Scotia and outside Canada.

3. *Individual Producer Responsibility and Accountability:* Effective EPR depends on producers being individually responsible for the management of regulated products. This creates a “green marketplace” in which competition between producers includes the performance of products after their discard by a consumer, for example in terms of the reusability or recyclability of components. In this context it is very important to avoid a situation in which industry-financed EPR entities are created that simply become monopolies that dictate the costs that consumers must pay. Market forces are necessary to regulate EPR costs and to distribute the benefits of EPR, in the same way as market forces regulate the costs and distribution of benefits related to products. Monopolistic practices have occurred in the EPR sector in the past, to the detriment of both consumers and the environment. Maximum benefits in Nova Scotia from the application of EPR will be achieved by ensuring that “producers” are individually responsible and accountable for meeting their EPR obligations..

The Department might consider development of a Handbook on Best EPR Practices that would facilitate the development of the most appropriate EPR initiatives in Nova Scotia.

### **Disposal Bans and Approval Requirements**

Nova Scotia is correct to ban materials from disposal that can properly be reutilized. Nova Scotia was among the first jurisdictions in the world to do this, and the measures proposed in this regard will be a welcome strengthening of this approach.

An important point to note is that the current Solid Waste Resource-Management Regulations (Schedule B) make clear that the banning of materials from disposal includes the banning of materials from landfill and incineration. However, the *“Revising our Path Forward”* document discusses bans from disposal ONLY in terms of bans from landfill—thus equating the concept of “disposal” with the concept of “landfill.” It seems clear, therefore, that the notion of “disposal” will be limited only to landfilling. This is a singularly retrogressive step that will cost Nova Scotians dearly, and has potential to lead to the dismantling of the materials recovery and recycling system—and associated investments—that our province has worked hard to build over the past 20 years. We consider incineration to be a form of disposal, and thus of lower value in the waste management hierarchy than numerous other options. We therefore submit that materials banned from “disposal” should be banned from both landfilling and incineration (or other forms of “thermal treatment”), as is the case in the current regulations. This issue is further addressed with respect to the proposals for *“Regulatory Clarity on Energy from Waste”*.

There is a clear link between product stewardship/EPR proposals and the list of materials/products that are proposed to be banned from disposal. However, there are materials that are proposed to be banned from disposal that are not proposed to be subject to EPR requirements. Why are textiles and

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non-packaging expanded polystyrene to be banned from disposal, for example, when there is no intent to implement a product stewardship/EPR initiative with respect to these materials?

It is indicated that the new materials that are proposed to be banned from disposal in landfills will be added to Schedule B of the Regulations. However, it is not indicated whether the materials and items already specified in Schedule B will be retained. Clarity is required that the materials/products that are included on the current list of materials/products that are banned from disposal will not be removed from that list.

### **Used Tire Management Program**

The proposal to expand the current program for used tires to include off-the-road tires and bicycle tires is highly desirable.

### **Regional Solid Waste Management Plans—Regional Requirements**

The organization of the province into solid waste resource management regions, and the development of regional plans, have been key to the identification and implementation of investments to build our current waste resource management system. As expressed in the document *“Revising Our Path Forward”*, the proposals to “update the geographic regions” and to do away with the requirement for the development of regional plans are neither coherent nor cohesive.

The document identifies that achievement of the waste disposal goal of 300 kg/person/year is a provincial goal, not a regional goal. Yet it is also clear that waste disposal is a fundamentally municipal responsibility, and that municipalities are the main operators of collection systems for compostable materials, recyclable materials and residual waste. The effect of the product stewardship/EPR proposals and parallel extension of the materials/products bans from landfill may be to shift responsibilities for management of those materials and products away from municipalities and towards the “producers.” However, it is surely the case that: (i) municipalities will continue to be accountable in law for the management of wastes within their jurisdictions; (ii) many wastes—and perhaps the majority by weight—will not be managed through product stewardship/EPR frameworks; and (iii) the achievement of any provincial waste management goal relies on the achievement of necessary levels of desired result at the municipal level.

Municipalities have varying opportunities and constraints in the waste resource management sector, and it may be that not all municipalities should be expected to undertake the same initiatives in the same way in the same time frames. The province has tools available to address imbalances in this regard, and can incorporate flexibility into policy measures to achieve the goals that have been established. However, the province cannot properly coordinate the achievement of waste resource policy objectives in the absence of information from, and the application of agreed and planned actions by, municipalities.

It is not clear how the regions will be “updated”, nor how effective waste resource management actions can be implemented in the absence of plans to guide actions at the regional level. The effect of this proposal—together with proposals for *“Improvements to the Enforcement of Solid Waste Regulations”*,

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see comments below—will be to leave the province without a core tool to properly coordinate the achievement of its waste disposal goal.

### **Regulatory Clarity on Energy from Waste**

The proposals for “clarity” with regard to energy from waste are anything but clear. Similar to the amendments that are proposed for *Regional Solid Waste Management Plans—Regional Requirements*, the proposals for *Regulatory Clarity on Energy from Waste* are neither coherent nor cohesive. The proposals state:

1. *Many technologies available today for the thermal treatment of municipal solid waste with energy recovery were not in existence, or not viable, when the regulations were first drafted in 1997*. However, the regulations were drafted for the express purpose of building a solid waste resource management system based on the objectives of reduction of the quantity of waste generated, and product/materials reuse and recycling. Incineration (a “thermal treatment” technology) was, and is, recognized as a “disposal” technology regardless of whether energy is recovered from the incineration process, and therefore it is a technology that cannot be used for the management of materials that are banned from waste disposal sites.

The issue of different types of thermal treatment technology available today or in times past is entirely irrelevant to the priority of building a solid waste resource management system to achieve the disposal of no more than 300 kg/person/year. These technologies - whether or not they achieve energy recovery - are all akin to incineration in so far as they result in the destruction of the materials value of the items that are treated - and this results in the permanent loss of the materials value of these items from the reuse and recycling streams that will optimize both environmental and economic benefits. Thus, thermal treatment technologies are clearly “disposal” technologies.

2. *Today’s innovative thermal technologies may present an opportunity when applied to the solid waste stream*. What opportunity is referred to? The document makes no reference to any opportunity in this regard, and makes no reference to any other document to provide an insight regarding the “opportunity” that is referred to.

It is proposed to change the definition of “incinerator” in the regulations, and it is contemplated that such a change “*could include other similar technologies that thermally process mixed municipal waste (e.g. pyrolysis, gasification, plasma)...*”. However, these are all different technologies and although all are “thermal” technologies, they operate in very different ways; only incinerators “incinerate.” Elephants and cows are both herbivorous animals, but this does not mean that we should re-define the animal known as “elephant” so that it also includes the animal currently known as “cow”.

The document states that a “*revised definition would provide clarity on how to assess the application of new and emerging technologies when they are used to process mixed municipal solid waste*” and that a change to the definition would ensure the application of disposal bans to all new technologies “*when they are employed to process mixed municipal solid waste*”. However:

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1. Based on the lack of clarity regarding a new definition of incineration, it is not at all clear how a revised definition will provide clarity on how to assess the application of new and emerging technologies.
  2. It is also not clear why the proposed amendments focus on the processing of mixed municipal solid waste, or what is meant by mixed solid waste; the term is not defined in the solid waste resource regulations. The current regulations are structured to encourage separation for the purpose of recycling, and the management of remaining materials in disposal facilities. The current regulations make no distinction for the purpose of disposal regarding whether municipal solid waste is mixed or not.
  3. Currently, the disposal bans apply to all designated materials, whether they occur in “mixed solid waste” (however that is defined) or as separated materials. While it is encouraging that the disposal bans would apply to new thermal treatment technologies when they are employed to process mixed municipal solid waste, the wording of the document makes clear an intent that wastes that are not mixed municipal solid wastes (i.e. which are separated municipal solid waste) may be treated by new thermal treatment technologies. Thus, the effect of this proposal - intentionally or not - is that any waste that has been separated can be treated by a thermal treatment technology, rather than being sold for a recycling purpose. This proposal will have the effect of allowing materials to be siphoned away from recycling streams into a disposal stream (i.e. thermal treatment). This will undermine the intent of the disposal bans to the point that they have no value, and this may prove to be fatal to the solid waste resource management system for which Nova Scotia has become internationally renowned.

These issues can best be resolved by: (i) substituting the term “thermal treatment technologies” for “incinerator” in the solid waste resource management regulations; (ii) defining “thermal treatment technologies” to include incineration, pyrolysis, plasma and other technologies that apply heat to waste; and (iii) ensuring that Schedule B (as amended) of the Regulations reflects that materials and products that are banned from waste disposal facilities are specifically banned from both thermal treatment technologies and landfills.

There may in future be a place for thermal treatment of waste resources in Nova Scotia. However, the first priority must be to create and optimize the institutional and financial frameworks that are necessary to support a waste resources management system that maximizes the greater environmental and economic benefits associated waste reduction, reuse and recycling. The proposals for EPR and the banning of additional materials from disposal go far in this direction. Accordingly, thermal treatment of waste should not be considered until the institutional and financial frameworks for waste reduction, reuse and recycling have been optimized, together with the economic benefits that are demonstrated in Nova Scotia to be associated with these waste-resource management approaches..

### **Improvements to the Enforcement of the Solid Waste Regulations**

Nova Scotia does not have “Solid Waste Regulations”. Certainly, we enjoy “Solid Waste-Resource Management Regulations.” Other jurisdictions that do not use discarded materials as a driver of economic development and environmental benefit have “solid waste regulations.” The unfortunate

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terminology that introduces this section of the *“Revising Our Path Forward”* document speaks to a mindset in the Department that after 20 years the people who should be leading the development of a waste resource economy still think of discarded materials as simply “waste.”

It is clear that the Department does not adequately understand the linkage between removing materials from disposal and creation of economic opportunity. Private sector investments in waste resource management depend on a reliable and predictable source of materials. Bans on materials entering waste disposal facilities theoretically ensure that the materials will be available for recycling. The failure of the province to enforce materials bans results in loss of economic opportunity for private sector investors in the waste resource sector, and amounts to bad faith on the part of the Department. One company - DAN-X Recycling- has indicated in June 2014 that it will reconsider its investment in equipment to process discarded fluorescent lights because of the uncertainty caused by the track record of failure of the Department to enforce existing bans on the disposal of materials.

The Department of the Environment is—and has been for many years—fully aware that large quantities of materials that are banned from disposal sites are nevertheless entering these sites. Both the Department of the Environment and the RRFB are fully aware that 50% of all waste entering waste disposal sites is, in fact, banned from entering waste disposal sites. The bans on the disposal of these materials from waste disposal sites are a function of regulations that are the responsibility of the Department of the Environment to enforce. The failure of the Department to enforce the bans has had the direct consequence that the regulatory credibility of the Department in this respect is highly diminished: The Department is simply not a credible regulatory entity in this regard.

In this context, it is good to learn that the proposed adjustments *“will allow department inspectors to focus on more complex and higher risk environmental issues;”* one hopes for a level of performance commensurate with the level of performance that the Minister no doubt wishes to achieve. On the other hand, the failure of the Department to establish any semblance of credibility regarding the task of making sure banned materials do not enter waste disposal sites leads one to view the prospect of the Department taking on “more complex and higher risk environmental issues” with considerable alarm.

The failure to enforce the solid waste resource management regulations in fact amounts to penalizing those who participate in the solid waste resource management system in good faith. Families and individuals accept the premise of the solid waste resource management system as a mechanism for our society to exercise stewardship over the environmental health of our province. People understand that there is a cost for this, and are willing to pay this cost within the bounds of what they deem to be reasonable. However, costs are higher and benefits are lower when the system is not optimized—and those who fail to participate in the solid waste resource management system create a situation in which the system cannot be optimized and costs are increased while benefits decrease. Simply put, the failure to enforce solid waste resource management requirements penalizes those who participate in the system by raising costs and reducing benefits.

Enforcement, of course, is simply a tool for achieving an objective—in this case, an optimized solid waste resource management system. Other tools are available, however, and have been implemented



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elsewhere. One of these tools is a “disposal tax” that can be charged by the province on each operator of a waste disposal site in Nova Scotia to the extent that materials that are banned from waste disposal sites in fact enter the site for which the operator is responsible. An independent audit function might be created under the supervision of the regulator (i.e. the Department of the Environment) to determine the type and quantity of such materials, and the audit method would be standardized according to a prescribed method.

This approach would have the effect of penalizing waste disposal site operators only to the extent that they fail to ensure that banned materials do not enter the landfill. This would provide a strong incentive for waste disposal site operators to ensure compliance with the materials bans. Operators would take whatever measures they deem appropriate to ensure banned materials do not enter disposal sites because they will want to avoid taxes of this nature. On the other hand, if banned materials enter waste disposal sites then it may be expected that operators will pass the costs on, eventually to the point that the delinquent entities must pay for their failure to properly separate their waste—and they, too, can avoid payments of this nature by separating their waste in accordance with the requirements. Thus, all stakeholders are incentivized to properly participate in the solid waste resource management system: no-one needs to pay any tax at all, so long as they participate in the solid waste resource management system as it is implemented at the local level.

Other benefits will also arise from this approach. In the interim, the entry of banned materials into waste disposal facilities will result in money being generated to pay for the independent audits that are required. Over the long term, materials recovery will be increased and recycling systems will be optimized as unit costs decline in response to higher volumes of recovered materials. And importantly, a mechanism will be implemented to achieve waste resource management goals that will be seen as fair and reasonable for all stakeholders, without reliance on what is widely understood to be a highly imperfect—even absent—enforcement framework.

This concept is not new. In Canada, both Quebec and Manitoba have implemented taxes on waste at modest levels. Elsewhere, a landfill tax has been implemented in England since 1996 and is established to not fall below £80/tonne (approx \$145/tonne) before 2020, at the earliest; at least 18 additional EU member states have a waste disposal tax. In Japan, a tax is charged on industrial wastes. In all cases, there is an understanding that the tax is fair and equitable; adaptation in Nova Scotia to support the materials bans and the solid waste resource management system would surely be understood and welcomed as a meaningful measure to achieve our solid waste resource management goals.

### **Beverage Container Deposit Refund Program Efficiency**

The Department should consider the issue of coherence between the RRFB-administered beverage container deposit-refund program and the proposed introduction of product stewardship/EPR to packaging. The current beverage container deposit-refund initiative is a stewardship initiative, but is implemented with funding from consumers and in the absence of responsibility or accountability by “producers.” What will be the future role of RRFB in this and other aspects of the province’s solid waste resource management system?

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The proposed changes to the administration of the portion of the deposit that is retained by RRFB are not fully clear. How will the administration of the “container recycling fee” differ in practice from investments and expenditures that are associated with the currently retained portion of the container deposit? It is indicated that although the “container recycling fee” would be at \$0.05/container initially, this amount would vary according to market conditions. Presumably, an increase in the “container recycling fee” will result in higher costs to the consumer through either a higher deposit, or a smaller refund; on the other hand, if costs are reduced, will consumers receive a larger refund, or will the deposit be reduced? Or will funds beyond the requirements of the “container recycling fee” and consumer refunds accrue to the benefit of the Province, which would seem likely in the absence of indications to the contrary?

### ***Further Considerations***

In addition to the above commentary, EAC believes that the DoE should address the following as part of the amendments to the solid waste-resource management regulations:

1. ***Definitions:*** Key terminology remains undefined in the solid waste-resource management regulations. As a consequence, there is a lack of clarity regarding policy objectives and an inability to properly develop regulatory, program and other initiatives. The following definitions are therefore proposed:
  - **Waste reduction:** Measures to reduce the quantity or toxicity of products or materials that may become waste or waste-resource when they are discarded.
  - **Reuse:** The act of direct reutilization of a material or a product without modification of its physical, chemical or biological properties
  - **Recycle:** The act of reutilization of a material or product to manufacture a new physical product through a process that includes modification of the physical, chemical or biological properties of the original material or product
  - **Recovery:** The act of obtaining of value from a discarded material or product through a means that is not reuse or recycling.
  - **Disposal:** The management of a waste-resource in a facility that makes impossible the further utilization of the material value of the waste-resource as a result of either physical and/or chemical changes, or because the waste-resource cannot be economically recovered from the facility.
  
2. ***Green Economy*** Many of the measures that are proposed by the DoE will create jobs in Nova Scotia and will contribute to the development of an economic future that is both environmentally and economically sustainable for Nova Scotia. The linkages between the regulatory changes that are proposed by DoE and economic benefits that will be derived should be clearly demonstrated by DoE. The financial aspects of these benefits will in total exceed the loss of revenue that landfill owners/operators may fear as a result of increased quantities of waste-resources being diverted away from disposal. However, DoE provides no indications regarding either the volume of these benefits or the measures that can be taken to ensure a reasonable distribution of these benefits across Nova Scotia. Accordingly, DoE should both quantify the economic benefits associated with

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the proposed changes to the waste-resource management regulations, and identify the measures that will be taken to achieve a reasonable distribution of these benefits across the province.