

CHBA Policy Position on Construction and Demolition Waste Management and Extended Producer Responsibility

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Contents

1.0	Context	1
2.0	Relevant CHBA Policy Positions	2
3.0	Defining the Waste Management Issue	4
4.0	CHBA Principles and Policy Positions on Construction Waste Management...	8
4.1	Recognition of the "final Payer"	8
4.2	Science-Based and Disciplined.....	8
4.3	Outcome-Based.....	9
4.4	An Adequately Resourced, Coordinated and Consultative Intergovernmental Process.....	9
4.5	Flexible and Realistic.....	9
4.6	Market-Based, Effective and Cost-Efficient.....	10
4.7	Consistent Wit the 4-Rs Hierarchy.....	10
4.8	Incentive Align with Desired Outcomes and Reward Innovation.....	11
4.9	Fair and Equitable.....	11
4.10	Transparent and Accountable.....	12
4.11	Addresses Both New construction and Renovation.....	12

1.0 Context

Construction and demolition (C&D) wastes account for a significant share (approximately 25%) of Canada's non-hazardous solid waste stream disposed of currently in sanitary landfills. In some jurisdictions regulations require some C&D wastes to be diverted from landfill, and managed through reuse and recycling facilities, but such requirements vary widely in terms of their scope and effectiveness.

Jurisdictions across Canada have recognized the need to move Canada's overall solid waste management system away from reliance on landfill disposal, as this involves considerable environmental impact, wastes valuable resources, and will inevitably require the siting of new landfill facilities – a process that is increasingly problematic.

In 2009, the Canadian Council of Ministers of the Environment (CCME), an intergovernmental forum, approved, in principle, development of a *Canada-Wide Action Plan for Extended Producer Responsibility*¹. This framework calls for the introduction of an Extended Producer Responsibility (EPR) regime for both construction wastes and demolition wastes by 2015-18. Provinces and territories would then adopt this system, as they saw fit. The CHBA is a stakeholder in this process, and provided its input to the CCME on the draft framework. The Association will continue to participate in the CCME process, as it unfolds.

In parallel with the CCME process, a number of provinces are already moving ahead with measures to reduce the flow of C&D wastes to landfill. In some cases, regulations are already in place. In others, such measures are being considered. In early 2010, the CHBA carried out a scoping study to understand better the current and pending legislation and regulations².

This CHBA policy position paper sets out the Association's views regarding future directions, processes and regulatory mechanisms that are appropriate for achieving increased waste diversion from the construction of new homes and communities, and the renovation of existing homes.

¹ *Canada-Wide Action Plan for Extended Producer Responsibility*, CCME, October 2009

² Waste Management and 'Extended Producer Responsibility' Regulations in the Residential Construction Industry, CHBA, March 2010

2.0 Relevant CHBA Policy Positions and Principles

The CHBA has supported the development and adoption of environmentally responsible housing practices since the mid-1980s, through such activities as the R-2000 initiative. The Association's 1991 position paper³ on the environment identified the need for *"measures dealing with solid waste management, toxic materials, material reuse and recycling"*.

In 2006, CHBA's membership adopted a more formalized environmental policy position as part of *The CHBA Member Builder's Statement of Business Values and Commitments*. This Statement incorporated an Environmental Commitment, which included the following:

"We acknowledge that the development of new communities, and the construction and renovation of homes, has a range of impacts on the environment, both today and in the future. We work with governments and others to develop environmentally responsible housing solutions.

We are committed to developing communities, and to building and renovating homes, in an environmentally responsible manner through utilizing appropriate technologies, materials, building practices and techniques.

We pursue continuous improvement and innovation in our processes, practices and products, in order to meet our environmental responsibilities."

In order to consolidate the elements of the *Statement* related to the environment, the CHBA released, in February 2007, a comprehensive position paper on the environment⁴. This was followed by the release of two Guideline documents focusing on homes⁵ and communities⁶.

In the 2007 position paper, the CHBA noted that its efforts in the environmental area would be governed by two criteria, to ensure the most effective application of its resources. These criteria were:

- *Significance of the environmental issue or opportunity, as indicated by measures such as environmental consequences and societal impact.*
- *Probability of achieving positive results from its efforts with respect to environmentally responsible housing. This requires understanding the accelerators of, and barriers to, positive progress (e.g., technical feasibility, market acceptability, affordability, regulatory compliance, risk and cost), and the ability of the CHBA or its members to control or overcome the barriers.*

³ *The Canadian Housing Industry and the Environment*, CHBA 1991.

⁴ *The Canadian Home Builders' Association's Position on the Environment*, CHBA, February 2007.

⁵ *Guidelines for New Home Builder, Renovator and Developer Members of the Canadian Home Builders' Association to the Development of Environmentally Responsible Housing*, CHBA, February 2007

⁶ *Guidelines for the Development of Environmentally Responsible Communities*, CHBA, April 2008.

The position paper also reaffirmed the Association's recognition that the efficient use of resources was one attribute of environmentally responsible housing:

"Resource efficiency: This includes minimizing the use of materials, reuse of waste produced in the construction process, use of products made of recycled materials, water conservation and durable construction (which reduces demand for products and materials)."

In setting out the CHBA's position, the Association noted that the development of environmentally responsible housing depends on the actions of a wide range of players, including the industry itself, manufacturers and suppliers, governments at all levels, other industry groups, financial institutions and the community at large.

Following on this, CHBA noted that:

"Because solutions to many environmental issues depend on authorities and capabilities beyond those of the CHBA, the Association favours tackling them in cooperative working relationships with other organizations in formal or informal partnerships."

Arrangements between the CHBA and other groups will vary depending on the environmental issue addressed because different issues require different interventions."

The CHBA will continue to work with groups most relevant to specific issues on a case-by-case basis. Key partnering organizations for the CHBA at the national level will continue to be CMHC⁷, NRCan⁸ and IRC⁹. This approach represents a continuation of a long tradition with the CHBA."

Finally, the CHBA noted that the Association would, *"continue to advocate market-oriented voluntary approaches rather than regulatory approaches to encourage the development of environmentally responsible housing"*.

These principles and policy positions, developed over a period of two decades, form the foundation for the CHBA's position in relation to construction and demolition waste management, and Extended Producer Responsibility, as set out in this paper.

⁷ Canada Mortgage and Housing Corporation.

⁸ Natural Resources Canada.

⁹ The Institute for Research in Construction, a division of the National Research Council of Canada.

3.0 Defining the Waste Management Issue

In 2002, Canadians produced 30.4 million tonnes of non-hazardous solid waste¹⁰. This amounted to 971 kg per person. Of this total, 39% came from household sources; the remainder came from the ICI sector, and construction, renovation and demolition (C&D) activities.

While C&D wastes accounted for 3.3 million tonnes¹¹, or 11% of the total sold waste stream in 2002, many jurisdictions report that up to 25% of landfilled waste originates from C&D activities. In 2002, only 16% of C&D wastes were diverted from landfill through recycling and other means.

Across Canada, jurisdictions are coming to terms with the need to develop new ways of managing Canada's solid waste stream. Landfill, the traditional waste management solution, is increasingly problematic.

In 2002, Canada's landfill sites accepted 23 millions tonnes of waste – just over 75% of the total produced. As existing landfills become full, it is increasingly difficult to site new ones. In 2000, 30% of landfills reported having an expected remaining life of between zero and ten years. More than half of all wastes landfilled in 2000 were disposed of in these facilities¹².

The environmental impacts of landfill are serious, ranging from groundwater contamination by leachate, to the release of landfill gasses such as methane that have significant climate change implications. In 2002, solid waste disposal on land accounted for 3% of all greenhouse gasses (GHG) produced in Canada¹³. This has led some jurisdictions to identify a long-term "zero-landfill" goal for waste management, where all wastes would be treated as resources and diverted for reuse and recycling¹⁴. This goal has already been achieved in some European countries.

As governments seek ways to manage solid wastes better, they are also cognizant of the costs involved. Particularly as governments look to waste management in the non-household sectors, there is heightened interest in applying the "polluter-pays" principle. However, with the advent of Extended Producer Responsibility (EPR) this maxim takes on new meaning.

EPR is a policy approach in which the physical and/or financial responsibilities of producers of goods are extended to the post-consumer stage of their product's lifecycle.

"EPR programs use one of two types of policy instrument: take-back requirements, which focus on the physical responsibility for the product; or economic instruments, which transfer the financial responsibility for disposal of the product back to the producer¹⁵."

¹⁰ *Human Activity and the Environment, Annual Statistics, Solid Waste in Canada*, Statistics Canada, 2005

¹¹ Note: In these StatsCan statistics, concrete and asphalt wastes and rubble from construction are not included.

¹² *Waste Management Industry Survey: Business and Government Sectors*, Statistics Canada, 2000.

¹³ *Canada's Greenhouse Gas Inventory, 1990 – 2002*, Environment Canada, 2004.

¹⁴ For instance, *From Waste to Worth: The Role of Waste Diversion in the Green Economy*, Ontario Ministry of the Environment, 2009

¹⁵ *Human Activity and the Environment, Annual Statistics, Solid Waste in Canada*, Statistics Canada, 2005

By shifting environmental responsibility “upstream” in the product life cycle to the producer, and away from the end user, or local governments (which most often provide waste management services to consumers), EPR relieves governments of the financial burden of waste management.

In so doing, EPR, as a policy approach, provides incentives to producers to align the design and manufacture of their products with the environmental considerations and costs of waste management. EPR is also intended to provide producers with flexibility in determining how best to meet their waste management responsibilities.

At present, EPR programs are well advanced for a few product streams, notably packaging wastes. A number of other streams are moving quickly towards EPR implementation, including printed materials, electronics, white goods, tires and automotive products.

Where EPR systems are being implemented, they generally have the following characteristics:

- Producers become wholly responsible for the products they produce through their entire lifecycle from “cradle to cradle” (assuming 100% diversion from disposal) – this responsibility has both a physical and financial dimension. Individual producers can develop and manage their own EPR regime, or achieve this collectively by joining with other producers and creating a producer responsibility organization to provide this service.
- The costs of a product’s “end-of-life” management, through recycling or reuse, is built into the product cost.
- Producers are responsible for implementing or contracting for a system of collection and diversion for their end-of-life products, including historical and “orphaned” products originally produced before the implementation of the EPR system or by firms no longer in business.
- Producers are required to document their product’s life-cycle, and provide detailed accounting of waste diversion results.
- Producers or organizations, created by producers to deal with their EPR responsibilities on a collective basis, are required to use part of the funds they raise to develop information programs and help ‘consumers’ comply with their system.

Currently, there are no EPR systems that apply to construction and demolition wastes, but through the CCME and various provincial policy initiatives, it is clear that these will be introduced in coming years – given the significant share of landfill demand tied to this waste stream, this is not surprising.

It is generally recognized that construction and demolition wastes are problematic in relation to EPR systems. New construction involves the aggregation of many different materials and products. Demolition involves the end-of-life management of building materials and products produced many decades ago.

A key issue in considering how EPR might apply to construction and demolition wastes lies in defining both the “product” and the “producer”. This issue of definition has significant implications for the residential construction industry.

- If the “product” is defined in an upstream context (e.g., as the materials and products used in construction), then builder and demolition firms would have less direct responsibility for their management and diversion.

In such a regime, material and product manufacturers, or first importers, would bear this responsibility. The manufacturer (or producer responsibility organization) would add the cost of their EPR-compliant waste diversion system to their product cost, and dictate to users of their products what waste handling measures were required.

Governments would likely apply regulations to enforce these measures. Implementation of EPR would most likely occur at the manufacturing industry level, to avoid any loss of competitiveness. Under such a system, builders would have no control over the EPR costs they, and their customers, would bear, nor over the on-site waste handling requirements imposed on them.

- If the “product” is defined as the home or building, the builder would bear EPR responsibilities. In a strict application of EPR principles, the builder (or an organization created collectively by all builders) would levy a fee on each unit of production, and this would fund current demolition costs (demolition representing the end-of-life for homes and buildings). Construction wastes would also have to be addressed in such a system.

Neither of these scenarios makes a great deal of sense, and there is a growing agreement among those involved in considering how best to apply EPR principles to C&D wastes that EPR is a “poor fit” in a number of ways.

It would seem more likely that practicalities will dictate the development of “EPR-type” waste management systems for C&D wastes, where EPR outcomes will be achieved, but through more flexible means, and probably on a material-specific basis.

Such systems could evolve through collaboration between the residential construction industry and major material and product producers, based on what is most effective and cost-efficient for both parties. There will be an obvious need also to collaborate with the commercial and institutional construction sector where common waste streams exist. This approach appears most suited to providing builders with some control over both costs and on-site waste handling requirements, while also sharing responsibility for outcomes more equitably.

In its representations to the CCME, the CHBA has also suggested that construction and demolition wastes be addressed separately, as each waste stream presents specific challenges and opportunities. The CCME appears to have adopted this suggestion. It is not clear whether provincial governments will follow suit.

For the CHBA, the movement towards EPR or EPR-type waste management regimes represents an issue of importance. This will inevitably impact new home builders, renovators and developers in terms of costs, on-site procedures and record-keeping. If such regimes are poorly conceived, these impacts could be significant.

Given that authority for non-toxic solid waste management is primarily a provincial matter, there is considerable potential for the development of disparate approaches across the country, and ad hoc

regulation of the industry similar to what has occurred in relation to energy efficiency requirements. **The endorsement of a Canada-Wide Action Plan on EPR by the Environment Ministers through the CCME opens the door to greater intergovernmental coordination in this area, but outcomes are unclear given that some provinces are already taking action in advance of the CCME process. Some municipalities are also moving forward with their own EPR-type waste diversion programs.**

Close collaboration between all levels of the CHBA in addressing construction waste management and the development and implementation of EPR or EPR-type systems and regulations would seem very prudent.

4.0 CHBA Principles and Policy Positions on Construction Waste Management

The CHBA believes that effective and equitable measures to manage construction wastes can best be developed if this effort is principle-based. As noted in Section Three, it is recognized that a number of important environmental principles apply, including individual producer responsibility, and the polluter-pays principle.

CHBA's actions, and its participation in activities which aim at increasing waste diversion from the residential construction sector, will be guided by the Association's core principles and existing policy positions.

In relation to construction waste management and Extended Producer Responsibility, these principles and policy positions apply as follows:

4.1 Recognition of the "Final Payer"

While every effort must be made to ensure that environmentally responsible management of construction wastes is achieved in the most cost-efficient manner, there will, in all likelihood, be increased costs involved.

In a competitive marketplace, the impact of such costs may be distributed initially among many parties, including material and product manufacturers, suppliers and trades, new home builders, renovators and developers, and consumers. In the longer term, it is most likely that such incremental costs will migrate, and be reflected fully in final product costs. As such, these costs will be borne by consumers of housing and buildings, including governments.

Reflecting this reality, those involved in development of new construction waste management processes and regulations must recognize the need to consider environmental and economic factors, including housing affordability and choice.

4.2 Science-based and Disciplined

The development and deployment of effective waste management regimes, and the development of public policies to underpin such systems, should conform with "Smart Regulation" principles. This requires decisions to be based on science and objective evidence, rather than on ad hoc factors. For this to be achieved, the processes used in the development of waste management solutions must be disciplined, open and transparent, and engage all interested parties.

There is also a need for authoritative data upon which to base development of waste diversion options, and consideration of appropriate regulations. At present, solid wastes produced by new home builders, renovators, by the ICI construction sector, and through building demolition are aggregated. This does not provide data clarity, and more refined data are clearly needed.

Accurate measurement and characterization of C&D wastes generated by residential construction is a prerequisite to development of effective, cost-efficient waste management options.

4.3 Outcome-Based

Consistent with EPR principles, the development and introduction of new construction waste management regimes should be outcome based – governments must set out clearly what goals are to be met and the timeframes involved, rather than prescribe how this should be accomplished.

Subsequent development of processes, procedures and supporting regulations must be undertaken by interested parties within such a goal-oriented framework; one where desired outcomes are clearly understood by all.

4.4 An Adequately Resourced, Coordinated and Consultative Intergovernmental Process

The development of effective and cost-efficient construction waste management solutions is a significant undertaking. The CHBA supports the need for intergovernmental coordination, and is hopeful that the CCME process will prove effective in this regard. For this to happen, the CCME process must have sufficient resources for research, and be well-coordinated with current and pending provincial activities. As well, task or working groups representing interested parties will need to be brought into the process at the appropriate point.

By undertaking development of a Canada-Wide Action Plan on EPR, with the concurrence of all provincial governments, the CCME must serve as a centre of responsibility in this process, and must provide meaningful direction to its members, and to industry. Given that a number of provinces have already embarked on parallel development of EPR and EPR-type systems for construction waste management, there is a need for some urgency in CCME's efforts.

4.5 Flexible and Realistic

Notwithstanding the importance of outcomes and timeframes that are defined clearly, these policies must be both flexible and realistic. Excessive policy rigidity, or unrealistic timelines, will undermine collaborative efforts and increase costs, while also limiting innovation and environmental benefits. As noted previously, a development process which is science-based and disciplined is most suited to avoiding such pitfalls.

As well, it is probable that effective diversion-based construction waste management will not easily be achieved through employment of "one-size-fits-all" solutions. Approaches that work in urban areas may not suit rural communities. Diversion schemes that utilize producer take-backs may be feasible in localities where these materials or products are manufactured, but unworkable in areas remote from manufacturing or recycling facilities. Again, such scenarios may well require considerable flexibility if desired outcomes are to be realized in a cost-efficient manner.

4.6 Market-Based, Effective and Cost-Efficient

Success in addressing construction waste management should be defined as achieving specified outcomes in the most cost-efficient manner possible. In practice, this can best be addressed by seeking market-based solutions and adopting regulatory requirements that enhance the ability of the marketplace to deliver innovations and cost-efficiencies. The principles set out in Point 4.9 addressing transparency and equity also apply in relation to government-imposed fees and levies, taxes and documentation requirements.

4.7 Consistent With the 4-Rs Hierarchy

The CHBA believes that construction waste management solutions should be consistent with the “4-Rs hierarchy”. In many cases, pursuit of applicable strategies and measures may also require changes to building codes, standards and municipal By-laws to remove existing regulatory barriers. The 4-Rs hierarchy is as follows, in order of importance:

- 1) Reduce This includes measures such as Design for the Environment (DfE) and optimum-value engineering, that allow manufacturers and builders to reduce material inputs and “design-out” waste. Waste reduction measures are particularly valuable when they also address other environmental priorities, such as energy efficiency.
- 2) Reuse Reuse strategies and measures are likely to be more applicable to home renovation than new built, but should be encouraged, wherever possible. Existing building codes and standards may be barriers to such reuse, and should be addressed.
- 3) Recycle Waste diversion to recycling is likely to be the most significant pathway to the overall reduction of waste volumes. It should be assumed that the optimum cost efficiencies in material recycling will be generated through private sector innovation. Material and product producers and builders should be provided with opportunities to develop such systems, rather than having third-party processes imposed on them. Reliance upon third-parties to operationalize such systems is appropriate only if the design of such systems emerges from manufacturer/builder collaboration and the principle of cost efficiency is foremost.
- 4) Reclamation/Conversion A sound waste management regime for construction wastes must include options for reclamation and conversion of residual wastes that cannot otherwise be economically managed through reduction, reuse or recycling. Such options include energy for waste (EFW) whether in a closed or open system, and fuel substitution particularly where bio-wastes can replace fossil fuels, as in cement manufacture.

Some jurisdictions in Canada do not currently allow such reclamation/conversion measures. Unless these policies can be supported by sound science, they should be challenged and changed. NIMBYism is not a valid rationale for banning conversion options such as EFW. If governments’ policy objective is to move towards a zero-landfill waste management system, waste conversion is an essential tool without which this objective cannot, in all likelihood, be met.

4.8 Incentives Align with Desired Outcomes and Reward Innovation

Following on the discussion of the 4-R's hierarchy, the design of construction waste management programs will need to ensure that the system's structural incentives align with the desired outcomes. Misaligned or perverse incentives will undermine the effectiveness of the system. For instance, as reduction of wastes generated is the first priority, the system will need to reward builders who deploy DfE or optimum-value engineering and succeed in reducing waste output per unit construction. Fee or tariff approaches based on unit output, or unit of material input to construction, rather than waste volumes, could act as a disincentive to such reduction efforts.

Proper alignment of structural incentives will also stimulate marketplace innovation, as builders and manufacturers seek to contain costs or capture business opportunities through innovative design and processes.

4.9 Transparent and Equitable

The residential construction industry reasonably expects future waste management regimes to treat the industry in a transparent and equitable manner. In practice, this will begin with acknowledgement by governments that addressing construction wastes is a shared responsibility, and assurance that industry perspectives will be given full and reasonable consideration. This also requires a commitment by government to a science-based and disciplined process for assessing options and developing solutions – one where the industry is a full participant.

The issue of transparency and equity has particular application in three areas, as follows:

- 1) Fees The incremental costs of new construction waste management systems should be borne in proportion to the use of such systems. Builders who generate less waste per unit output should pay less. All fees levied for waste management should be clear and transparent, and all such fees must reflect the actual cost of services provided, as required by many provincial statutes.
- 2) Taxes The direct cost of waste management services should be based on a fee-for-service, as discussed previously. However, it is not unlikely that governments will also employ some taxes, such as landfill surcharges, to achieve their waste management goals. Where such taxes are instituted, it will be essential to ensure that revenues generated from one sector, such as residential construction, are not used to subsidize waste services in others, such as curb-side residential waste collection.

Environmental taxes should not be used by governments to circumvent what statutes otherwise prohibit in relation to user fees, nor should they be used for general government purposes.

Where taxes are employed to underpin the competitive viability of waste diversion options, such taxes should be used to support waste diversion activities in a manner proportional to their sources. Waste management-related taxes paid by new home builders and renovators should be applied to support the waste diversion systems they use, thus achieving tax-neutrality.

- 3) Documentation Costs EPR and EPR-type systems often involve onerous documentation requirements. In many cases, this “paper cost” is unjustified and wasteful. It is often difficult for large multi-national manufacturers to comply with such documentation requirements, and these could have very significant negative impacts on the small business operators typical to the residential construction industry. This is another area where “Smart Regulation” principles will need to be applied. Documentation requirements must be kept to an absolute minimum, and no such requirement should be enacted unless it can be fully justified.

4.10 Collaboration and Accountability

The overall success of efforts to develop and deploy new construction waste management systems requires that all parties commit themselves to collaboration and accountability. The greatest degree of success will likely come about through ongoing collaboration. A collaborative and accountable system is a necessary prerequisite for achieving results.

4.11 Addresses Both New Construction and Renovation

Although obvious, the need to develop waste management solutions for both new home construction and renovation needs to be reinforced. The two sectors of the residential construction industry produce quite different waste streams, and renovators will need to participate in some of the practices likely to evolve in the demolition sector. As well, waste handling systems for new construction may need to be quite different than those used by renovators, who function within existing neighbourhoods.