



2019 YEAR IN REVIEW



Cement
Association
of Canada

Association
Canadienne
du Ciment

CONCRETE
Build for *life*™

LE BÉTON
Bâtir pour *l'avenir*™

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COVER

Left column, top to bottom:

- Bosje Chapel, Witzenberg District, South Africa (architect: Steyn Studio)
- Stubbes Precast Head Office, Harley, ON (IBI Group Architects (Canada) Inc.); 2019 Ontario Concrete Awards recipient
- Concrete pipes, Calgary, AB
- Sprague Road, Region of Waterloo, ON

Right column, top to bottom:

- Confederation Bridge, PEI-N.B. (architect: Jean M. Muller)
- Pier 27 "The Tower on the Lake", Toronto, ON (architectsAlliance); 2019 Ontario Concrete Awards recipient

NATIONAL HIGHLIGHTS, page 8:

Top, left to right:

- Maison du développement durable, Montreal, QC (Menkes Shoener Dagenais Letourneux Architectes)
- Valley Line West Light Rail Transit West Edmonton Mall station, Edmonton, AB

Bottom:

- Royal Alberta Museum, Edmonton, AB (architect: DIALOG)

REGIONAL HIGHLIGHTS, page 19:

Top, left to right:

- Halifax Central Library, Halifax, NS (Schmidt Hammer Lassen Architects)
- River City Phase 3, Toronto, ON (Saucier+Perrotte Architectes / ZAS Architects); 2019 Ontario Concrete Awards recipient

Bottom:

- Royal Alberta Museum, Edmonton, AB (architect: DIALOG)



Message from the President and CEO



Dear Board Members and Colleagues,

Once again this year it is my pleasure to report to you on the work we have done over the past twelve months and highlight some of our achievements. This year brought significant changes and uncertainty in our external environment, politically, economically and on

the policy side. We also welcomed a new Chairman in February – Filiberto Ruiz from St Marys – who will serve until February 2020.

A Challenging Market Landscape

Much like the preceding year, a lack of consumer and business confidence remained a drag on the Canadian construction industry as it registered minimal growth in 2019. With poor weather across the country in the winter, 2019 started off on a slow footing for the industry. While there were hopes that the federal election would see a boost for infrastructure investment during the peak construction season, Canadians were instead treated to billions in new spending promises and announcements that hopefully will impact the sector in 2020 and beyond. We learned this year that the federal government's Investing in Canada infrastructure plan led to offsetting reductions in provincial and municipal capital spending, so public-sponsored projects were less than anticipated, and private-led residential, civil and commercial projects were tepid. The market in Alberta and Saskatchewan continued to be impacted by the general downturn led by the oil and gas sector and fiscal belt-tightening; unfortunately, it may take some time to see markets

returning to historical levels. The BC and Quebec economies continue to be the best of the Canadian provinces in terms of general growth, while big-project promises in the GTA give hope to improving conditions in Ontario.

Rewarding Collaboration with Our Allies

Building stronger and more collaborative relations with our Allies remained a key objective. We continued to work closely with our Members and continuously engaged with our Allies on several files and initiatives across Canada throughout the year and appreciate the many opportunities they have provided to leverage their channels and expand our reach. I am grateful for their support and contribution and looking forward to their expanded role in 2020.



Ontario Members and Allies meet with the Honourable Monte McNaughton, Minister of Labour, Training and Skills Development.

A New Committee Structure for Enhanced Effectiveness

The CAC Board of Directors concluded this year that the organization needed to adapt to the rapidly evolving political landscape and competitive environment for our products. Through consultations with our Members and Allies, the CAC agreed on a new governance structure to better drive outcomes and maximize the efficiency and effectiveness of our actions using our collective resources. This involved developing national committees with our Allies to replace the existing regional internal framework the CAC has employed for over a decade. The four new committees are: "Government Legislation and Regulatory Affairs" ("GLRA"); "Concrete as the Sustainable Building Material" ("CSBC"); "Competing Building Materials and Systems" ("CBMS"); and "Joint Health & Safety" ("JH&S"). Starting late this Fall, co-chairs from the cement and concrete industries will complete the drafting of initial agendas for the new committees to begin work.



Alberta Members and Allies meet with the Honourable Ric McIver, Alberta Minister of Transportation.

An Important International Partner: The GCCA

It is becoming abundantly clear that the challenges and opportunities we face as an industry in Canada are shared around the world. It has been encouraging to see a coalescing of the cement and concrete industry on an international scale as the newly formed Global Cement and Concrete Association (GCCA) finds its feet and refines its agenda. This new association is CEO-driven and has tasked the management and committee system to work quickly and collaboratively. As the wood industry nips away at our market share, the GCCA wants to ensure concrete becomes the building material of choice.

While it is unusual for the CAC to get involved directly in international initiatives, the GCCA provides an important opportunity to share the knowledge, experience and lessons we have learned in Canada, particularly on climate policy and, equally, to learn and benefit from the tremendous expertise and efforts of our international peers. The global cement company CEOs are keenly aware that we should not "reinvent the wheel", but take best practices currently being employed and build on those.

The CAC participated in several GCCA events throughout 2019. I have the privilege of being part of the Communications Committee, which takes the work of the other six committees and pushes that work out across the globe.

Most recently, the GCCA held its second annual conference and AGM on October 9-11 in Singapore where the Canadian industry was represented by the CAC as well as St Marys' Bill Asselstine, as a member of the "Future of Construction" working group.



CRH Chief Executive and GCCA Chair Albert Manifold addresses GCCA "Innovation in Focus" conference attendees.

The GCCA continues to make good progress toward building a common library of resources, messaging and communication products to unify and promote the sector around shared approaches to addressing common challenges, including climate change, tall wood, and health and safety. It has proved a valuable forum to test and promulgate some of our efforts and successes. For example, there

has been tremendous appreciation and support from other GCCA members for our groundbreaking study by the International Institute for Sustainable Development (IISD) and related efforts to counteract the environmental claims of the wood industry. The GCCA has helped ensure that the IISD study received an international exposure.

The CAC has also been called upon to help other members develop strategies and coordinate their efforts to shape climate policy – particularly with the PCA as they develop their strategic positioning on carbon pricing. The GCCA is also making progress in adapting legacy WBCSD CSI programs. At the AGM, the global CEOs that comprise GCCA's Board directed GCCA staff to make climate change a more urgent and central priority in their work and to leverage the regional capacity and expertise of existing national/regional cement and concrete associations.

The urgency of the climate crisis is one that I focused on almost exclusively with my colleagues at the GCCA. We will not have credibility with decision makers if we are continuously seen as laggards on society's most important challenge.

A Changing Political Landscape

Domestically, the battle between the federal government and some provinces on the federal carbon pricing backstop was a defining feature of our industry's key challenges all year long, especially in Ontario and Alberta. The impact on cement manufacturing facilities is potentially significant and worrisome. Tremendous efforts were necessary to understand and quantify the potential costs to our industry and to work with provincial governments in order to alleviate these impacts.

This year also saw the election of a new United Conservative Party (UCP) government in Alberta, the re-election of the Progressive Conservative government in Manitoba, and a weakened minority Liberal government in Ottawa.



With Alberta Premier Jason Kenney and CAC's Shane Mulligan.



With BC MLA Linda Reid and CAC's Ken Carrusca.

While the new government in Alberta may create positive opportunities for our industry in the longer term, the transition period was challenging this year as we had to develop new working relationships with freshly-elected officials, in particular as it relates to climate policies. The new Alberta government provided only eight weeks for consultations on its new climate plan. It took a lot of work and time spent in Alberta this summer to achieve the positive result we did with this new climate plan.

In Ottawa, the re-election of the Liberals announced the continuation of the government's main climate policies such as the federal carbon pricing backstop and the Clean Fuel Standard (CFS). We will continue our collaboration with federal elected officials and build relationships with new players responsible for the files important to our industry, as soon as the new Parliament starts its work in early December. We were particularly pleased with the appointment of Catherine McKenna as the new Minister of Infrastructure and Communities. Catherine is well known to us (and us to her) and she believes in many of the issues important for us like lifecycle assessment and a climate lens approach to procurement. With her appointment, our job has gotten just a little bit easier.

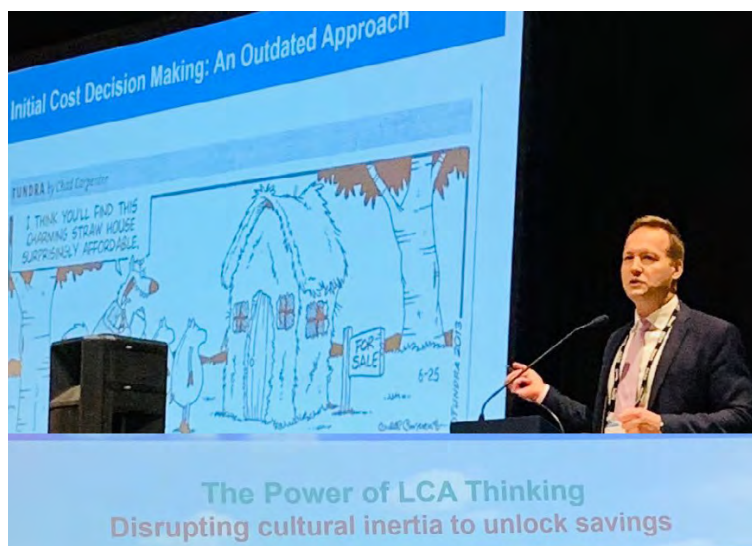
Continued Support for Science-Based Decision Making

The CAC is proud to be an association that promotes science-based decision-making. We continued this year our involvement in various research programs, especially as it relates to concrete pavement, LCA and LCCA. We also intensified our work on the science-based approach to counter the environmental claims of the wood industry. The study we commissioned from the International Institute for Sustainable Development (IISD) was released in April and confirmed that the wood industry does not fully disclose the GHG-related impacts of wood products over their full lifecycle. The results of this study, which were reviewed by an independent panel of experts, showed that as much as 72% of GHG emissions over the lifecycle of wood products may not be accounted for in most LCA studies, mainly because they don't account for biogenic carbon. The IISD report *Emission Omissions: Carbon accounting gaps in the built*

environment was central to our efforts in 2019 to position concrete as the sustainable construction material of choice.

We continued to dedicate time and effort towards a "three-screen approach" to infrastructure funding and to promote this approach with federal, provincial and municipal governments. This three-screen approach is designed to ensure that government-funded infrastructure projects will be built once, built right and built to last. Simply put, the approach advocates for applying three screens – lifecycle costing, lifecycle greenhouse gas emissions and a "best available technology" – during the infrastructure decision-making and procurement process.

In a related development, the National Research Council (NRC) announced that it would invest some \$14 million to establish a centralized national lifecycle data inventory and to develop best practice guidelines and performance benchmarks for using lifecycle assessment in government procurement. The "Low-Carbon Infrastructure through LCA Initiative" (or LCA²) is an initiative to collect the data and develop the tools that governments and private sector actors will need to implement our proposed "three-screen" approach.



CAC's Adam Auer at FCM's annual conference.

It is proof that the CAC's philosophy of consistent, constant, coordinated and compelling advocacy in collaboration with our broad coalition of stakeholders can make real change in support of cement and concrete's interests. Leveraging our IISD *Emission Omissions* study, we were successful in convincing NRC to establish a separate technical committee under the LCA² initiative to examine and address uncertainties with respect to accounting for biogenic carbon in LCA. The LCA² initiative represents our best opportunity to date to push for more transparent and more robust accounting of the carbon footprint of wood products.

Continued Advocacy on Climate Policy, Clean Fuel Standard

Our organization has once again this year proved to be a truly national one. As in previous years, we have worked with governments across Canada to ensure they understand the need for the cement and concrete industry to have a level playing field and enable our members to be competitive and drive value for their shareholders. We worked diligently at the national, provincial and municipal levels, to ensure that our messages are being heard by key political leaders and the most senior civil servants. We also continued to develop and nurture working relationships with environmental organizations across the country. These organizations add credibility to the CAC messaging when they support what we do.

2019 was a very significant year in climate policy as the federal carbon pricing system came into effect in Ontario, while the provincial government is developing its own provincial plan and hopes to get it approved by the federal government as equivalent to the federal system in the future. Cement plants are subject to the federal system in the meantime. In addition, the decision from the new Alberta government to repeal its existing carbon pricing system and replace it with a new system starting in January 2020 created uncertainty for large emitters such as cement manufacturing plants. The legal challenge of the federal system by Alberta, Ontario, Saskatchewan, Manitoba and New Brunswick will continue in 2020 while the federal government assesses the equivalency (or lack thereof) of the evolving provincial plans, notably Alberta and Ontario. The CAC will continue to be engaged in this file in 2020 to protect its members' interests.

The other major federal climate file that received significant attention in 2019 is the federal Clean Fuel Standard (CFS). The regulatory process to implement the CFS for liquid, gaseous and solid fuels advanced somewhat in 2019 with the release of a "Draft Regulatory Approach" for liquid (i.e. transportation) fuels. Concerns and criticisms of the CFS as a second "hidden" carbon tax have been mounting as various stakeholders come to understand the potential cost impacts on all fuels used in the transportation, building and industrial sectors. The CFS remains an important file for our sector and we will continue to seek an approach that offers opportunities to establish cement and concrete leadership in reducing GHGs while securing our competitiveness and guarding against carbon leakage.

Exciting Advancements on Path to Carbon Neutrality

On the technology side, 2019 saw two major advancements for the cement industry on the Carbon Capture Utilization and Storage (CCUS) front that will begin the real transformation of the cement industry in reducing its GHGs.



The Honourable George Heyman, BC Minister of Environment and Climate Change Strategy with Lafarge Canada Inc.'s Brad Kohl at the launch of Lafarge's Low Carbon Fuels technology.

Earlier this summer we saw a partnership between Lafarge and Svante Inc. to develop and demonstrate the first full-cycle solution to capture and reuse CO₂ from a cement plant, while also reducing greenhouse gas emissions. Project CO₂MENT will demonstrate and evaluate Svante's CO₂ Capture System and a selection of CO₂ utilization technologies at Lafarge's cement plant in Richmond, BC, over the next four years. This project will be led by Svante, in partnership with Lafarge Canada Inc. and Total, a major energy company. It also received financial support from CO₂ Capture Project (CCP), the Province of B.C. and Canada's federal government through the National Research Council's Industrial Research Assistance Program (NRC IRAP).

On November 28, Lehigh Cement, the International CCS Knowledge Centre and Emission Reductions Alberta announced a major milestone in Canada's efforts to fight climate change with an advanced feasibility study being undertaken. This first step toward a first-of-its-kind commercial-scale cement carbon capture and storage (CCS) project will be at Lehigh's cement manufacturing facility in Edmonton.



The Honourable Jason Nixon, Alberta Minister of Environment and Parks, joins Lehigh Cement's Joerg Nixdorf at the announcement of Lehigh's full-scale carbon capture and storage feasibility study.

This project represents an opportunity to cut emissions on a large scale within five years and would represent the equivalent of eliminating over 26 million trash bags or the energy used in over 71,000 homes every year. The Knowledge Centre is providing the experience-based knowledge needed to implement and optimize the operation of large-scale CCS.

The Year Ahead

As you can see, we have many achievements to celebrate and be proud of. However, we need to redouble our efforts to protect our social license to operate and create a culture of concrete across our vast country and enhance the visibility and credibility of the cement and concrete industry.

The coming year will bring its own unique set of challenges and opportunities, as climate policies are further detailed by the federal and provincial governments. Throughout the federal and provincial political turmoil of 2019 one thing now is certain in all Canadian jurisdictions – the question of putting a price of carbon has been settled. Whether it be Alberta or Ontario, there may have been opposition to a carbon tax but industry everywhere now faces some form of carbon pricing and there is little chance of going back.

One of our biggest challenges remains the aggressive and well-funded campaigns conducted by the wood industry across Canada. In 2020, we will actively address claims from the wood industry relating to carbon sequestration and the overall sustainability of wood products, using the results of the IISD research, and also through our ongoing involvement in the LCA² initiative led by the NRC. We will also continue to push on the building code front, challenging changes as needed, so that building codes are supported by scientific facts.

We will invest significant efforts in Alberta and at the federal level as the new governments complete the first full year of their respective mandates. This coming year will be critical for the cement and concrete industry to position ourselves as crucial partners and collaborators for these governments, while we continue to work with other jurisdictions such as Ontario, Quebec and Nova Scotia.

I am confident that we will be up to the task by using our past experience and taking advantage of our new governance and committee structure. Growing on the success of the 2017 federal Lobby Days, the CAC members and Allies will again convene in Ottawa in the Spring of 2020 to engage the minority government and opposition parties to advance our collective issues. The new Committees will also convene for face-to-face strategy discussions around these Lobby Days.

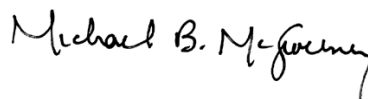
In my role as President and CEO, my priority is to ensure that our Members' financial contribution to the CAC is fully optimized. We need to understand their priorities and economic pressures and adapt accordingly. The CAC Members are the shareholders of this association and we must be mindful to always ensure we are in step with the collective vision they have for the cement and concrete industry in Canada.

Our priority continues to be broadening and deepening our relationships with all levels of government, stakeholders like the architectural, engineering and green building communities, our Allies, and the broader environmental community. It is our goal to continue to leverage and maximize the financial commitment of the CAC Members and Allies to drive a culture of concrete across the country. Our challenge in 2020 will be to ensure our new committee structure is aligned to execute on priority areas and ensure that the CAC remains an industry leader for many years to come.

I am blessed to be surrounded by a committed and talented team at the CAC, who work tirelessly for our Members. After the realignment of CAC resources in 2018 our professional staff adapted seamlessly to the new focus in 2019 in addressing the challenges with our motto of 'doing more with less'. With great sadness but with the thanks from the whole industry, Rick McGrath retired after 37 years of faithful service to codes and standards in Canada and after an exhaustive search process his replacement started with the CAC on November 12th. The CAC welcomed Stamatina Chasioti as the new Director of Codes and Standards and she is working with Rick to come up to speed quickly. In the 'what-is-old-is-new-again' category, the CAC was excited to see Tim Smith returning to the organization after a stint in the private sector, allowing us to immediately increase our expertise in concrete pavements. 2020 will be another busy year where the whole staff will be engaged with Members and Allies to get the new committees rolling and productive.

The prospects and challenges are immense for our industry in 2020 but regardless, I know we will continue to provide the services that our Members and Allies value and expect from us, seizing the opportunities and tackling the challenges that lay ahead of us.

Thank you for your support, collaboration and work and best wishes for a Happy, Healthy and Prosperous New Year in 2020!



Michael McSweeney

President and CEO, Cement Association of Canada



NATIONAL HIGHLIGHTS



Industry Affairs

CAC staff continued to participate in significant policy development on air quality issues in 2019. We are involved in several aspects of the national Air Quality Management System (AQMS), in particular as it relates to the development of ambient air quality standards. The CAC sits on the AQMS Stakeholder Advisory Group, which provided us once again this year with an opportunity to ensure our sector's competitiveness was always top of mind as new policies or approaches were designed and implemented.

We continue to work on the Canadian Ambient Air Quality Standards (CAAQS) Development and Review Working Group, which has been tasked to help the Canadian Council of Ministers of the Environment (CCME) develop ambient air quality standards for various air pollutants. While the group was supposed to review the standards for fine particulate matter (PM_{2.5}) this year, government officials decided that they needed more time to work on the air modeling that supports the discussions, so the working group was mainly inactive in 2019. Work will resume in 2020. In the meantime, our efforts from recent years paid off in 2019 with the release of CCME's *Guidance Document on Air Zone Management*, which provides guidance on the nature of management, monitoring and reporting actions to be implemented at an air zone level under the AQMS. The guidance document applies to all CAAQS and includes new wording about implementation of the CAAQS by jurisdictions, clearly stating that technical achievability, practicality and implementation costs must be considered when applying the standards. It also clarifies that CAAQS were not developed as facility-level regulatory standards. These important points were included as a direct result of CAC officials and other industry representatives being part of the working group.



Atlantic Lobby Day — from left to right: CAC's Martha Murray, Atlantic Concrete Association's Pam Woodman, Larry Harrison, MLA for Colchester-Musquodoboit Valley, Lafarge Canada Inc.'s Rob Cumming and Travis Smith.

We also provided advice to members throughout the year regarding the federal *Multi-sector Air Pollutants Regulations* (MSAPR) which includes emission limits for SO₂ and NO_x that will start applying to cement manufacturing facilities in 2020.

Cement manufacturing facilities continue to report their releases to the environment through the National Pollutant Inventory Release (NPRI) administered by Environment and Climate Change Canada (ECCC). A CAC representative sits on the NPRI multi-stakeholder Work Group, which provides advice to the federal government on the implementation of the NPRI program. Several industry reporters, including some cement plants, have experienced serious problems with this year's reporting exercise using ECCC's online tool. ECCC recognized the problem and assured the Work Group that improving the electronic reporting tool was a priority for them. In 2019, there were a few proposed changes to the NPRI that could affect cement plants. The CAC worked with plant operators in order to provide ECCC with information that would help government assess the impact of these potential changes. A letter was sent to ECCC in May expressing concerns with some of the proposed changes and ECCC addressed all of them in a satisfactory manner, by either deciding to not proceed with proposed changes or by amending the changes.



The CAC's Michael McSweeney and Shane Mulligan, Lafarge Canada Inc.'s Jonathan Moser and Lehigh Hanson's Kent Stuehmer were pleased to join the Honourable Jason Nixon, Minister of Environment and Parks on the occasion of Alberta's TIER announcement, along with representatives from other sectors.



The Honourable Jeff Yurek, Ontario Minister of the Environment, Conservation and Parks, with from left to right: Michael McSweeney, CAC, John McCabe, Lafarge Canada Inc., John Pontarollo, CRH, Steve Gobbatto, CBM, Filiberto Ruiz, St Marys Cement, David Redfern, Lafarge Canada Inc. and Steve Machej, Dufferin Construction.

Sustainability and ENGO Strategy

Federal Climate Policy

CARBON PRICING

First announced in December 2016 with the release of the Pan Canadian Framework on Clean Growth and Climate Change (PCF), the federal carbon pricing backstop (the “backstop”) finally came into force in 2019. The Backstop has two components: 1) A direct tax on fuels (which came into effect April 1, 2019 and 2) An Output Based Pricing System (OBPS) for industry, which came into effect January 1, 2019. The rationale for creating two separate components to the Backstop is to protect the competitiveness of Emissions Intensive Trade Exposed (EITE) sectors, including cement. The OBPS exempts large emitters (over 50Kt of GHGs per year) from the tax on fuels in place of an industry-specific production-weighted carbon intensity benchmark. OBPS facilities only pay the carbon price on GHG emissions above their benchmark, which is a set percentage of each sector’s national average carbon intensity (using 2014-2016 as reference years).

Both of these Backstop components apply only in provinces where no equivalent system is in place. To date the OBPS is in effect in New Brunswick, Ontario, Manitoba, and (partially) in Saskatchewan while the Fuel Charge applies in the same provinces with the addition of Alberta (starting January 1, 2020 – Alberta initially had an equivalent fuel tax, but it was cancelled by the newly elected government after the May 2019 provincial election). The price of both the fuel tax and OBPS begins at \$20 per tonne of carbon in 2019, rising \$10 per year to \$50 in 2022, at which point the Backstop will be up for review and potential revision.

From the moment the PCF was announced in 2016, the CAC initiated a constructive and determined campaign with government and climate policy influencers to engage and educate them on the cement and concrete sector, the importance of addressing EITE competitiveness in carbon pricing system design, and the role cement and concrete can play in mitigating and adapting to climate change. While the consultation with Environment and Climate Change Canada (ECCC) was protracted and frustrating at times, the CAC forged strong positive relationships with both the bureaucracy and the Minister’s office and we were ultimately successful in earning the cement industry the highest level of EITE protection afforded under the OBPS system. Initially, only the cement and lime sectors qualified for the highest level of protection; however as the federal

election loomed and tensions around carbon pricing mounted, further adjustments were made to add the steel and the fertilizer sectors to the highest category of protection while the remaining sectors were also afforded a modest relaxation of their benchmarks. This is generally what happens during a pre writ election period. Governments get nervous and sound science takes a back seat behind political expediency. This is also a risk in minority government situations, so we will need to remain extra vigilant in the coming years.

ECCC’s initial proposal was an aggressive universal industry benchmark of 70% of the production weighted national average GHG intensity covering both process and combustion emissions. Through the tireless efforts of CAC staff, the final regulations assigned cement a benchmark of 95% of the production weighted national average. The change in benchmark from 70% to 95% represents avoided compliance costs in excess of \$165 million for the Ontario cement sector in the 2019-2022 reporting period. A huge success. In addition, in a last-minute push the CAC worked with one of our Ontario members to secure a separate definition and carbon intensity benchmark for clinker in the final OBPS regulations. This change offers an additional level of competitiveness and carbon leakage protection for clinker produced in Canada but exported to the U.S., saving tens of millions in additional potential compliance costs.

While much of the heavy lifting on the OBPS is now behind us, there remain important aspects that have yet to be finalized. Most important of these include: a) how revenues collected under the OBPS will be returned to industry to support low-carbon investments and innovation; b) the acceptance (or not) of Alberta’s new TIER system as equivalent under the Backstop, and; c) initiation of the discussion on the terms and conditions for the review and revision of the OBPS in 2022, including potential increases in the carbon price above \$50 as well as a potential tightening of OBPS benchmarks.

The CAC has already provided significant input on these issues through formal and informal submissions and discussions with officials. With strong relationships across government and with supportive industry and ENGO allies, the CAC is well positioned to represent the cement and concrete sector in these deliberations as they progress through 2020.

TABLE 1 – PROJECTED ANNUAL CARBON PRICES IN CANADA 2019-2025

	FEDERAL	B.C.	ALBERTA	ONTARIO	QUEBEC	N.S.
2019	20	40	30	20	21.62	<21.62
2020	30	45	30	30	23.13	<23.13
2021	40	50	40	40	24.75	<24.75
2022	50	50	50	50	26.48	<26.48
2023	≥50	≥50	≥50	≥50	28.34	<28.34
2024	≥50	≥50	≥50	≥50	30.32	<30.32
2025	≥50	≥50	≥50	≥50	32.44	<32.44

CLEAN FUEL STANDARD

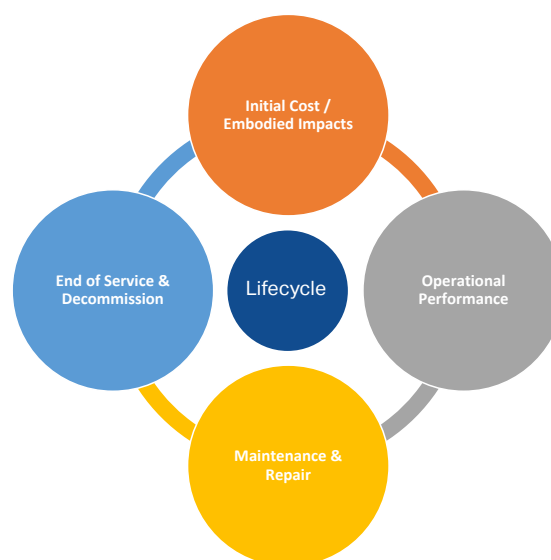
The regulatory process to implement a federal Clean Fuel Standard (CFS) for liquid, gaseous and solid fuels advanced somewhat in 2019 with the release of a “Draft Regulatory Approach” for liquid (i.e. transportation) fuels. At the same time, concerns and criticisms of the CFS as a second “hidden” carbon tax have been mounting as various stakeholders come to understand the potential cost impacts on all liquid, gaseous and solid fuels used in the transportation, buildings and industrial sectors.

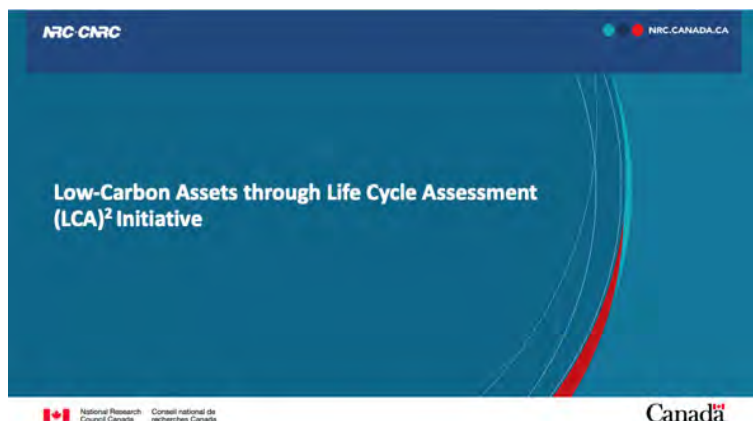
The CAC is actively engaged with federal government as a member of the CFS Technical Committee as well as a special sub-committee (struck on the insistence of the CAC and other EITE allies) to advise on how to address the potential EITE competitiveness impacts of the CFS. Cement remains relatively well positioned to leverage low-carbon fuel substitution as a strategy to mitigate CFS costs and perhaps even to generate credits to monetize into the CFS system. However, details remain sparse and the ongoing reluctance of ECCC to consider the cumulative EITE cost impacts and carbon leakage risks of the OBPS, CFS and other federal and provincial climate policies is extremely concerning. As the CFS development process resumes under a minority government, with most opposition parties demanding stronger action on climate, the CAC will be redoubling its focus on the CFS in the coming year. 2020 is expected to see the finalization of the CFS regulations for the liquid fuels stream (coming into force in 2022) and the development of the draft regulations for gaseous and solid fuels (to be finalized in 2021 and coming into force in 2023).

Three-Screen Lifecycle Based Approach to Infrastructure

Among the more positive developments in terms of federal climate policy has been the acceleration of interest and action on integrating lifecycle assessment into public procurement of buildings and infrastructure. The CAC has been a tireless advocate for what we have called a “Three-Screen Lifecycle Based Approach” that integrates lifecycle costing, lifecycle greenhouse gas emissions and a “best available technology” screen into the procurement process. Much of our thinking and advocacy on this issue has been informed by real-world challenges our industry faces in getting governments to recognize low-carbon solutions – such as Portland Limestone Cement – in their own operations (which represent a significant percentage of concrete volumes across the country).

Momentum began to build last year with the Minister of Infrastructure announcing the introduction of a “climate lens” for all federally funded infrastructure projects over \$10 million. This was followed at the end of 2018 with an announcement that the federal government would invest some \$14 million to establish a centralized national lifecycle data inventory and to develop best practice guidelines and performance benchmarks for using lifecycle assessment in government procurement. The “Low-Carbon Infrastructure through LCA Initiative” (or LCA²) is an initiative to collect the data and develop the tools that governments and private sector actors will need to implement our proposed “three screen” approach. It is proof that the CAC’s philosophy of consistent, constant, coordinated and compelling advocacy in collaboration with our broad coalition of stakeholders can make real change in support of cement and concrete’s interests.



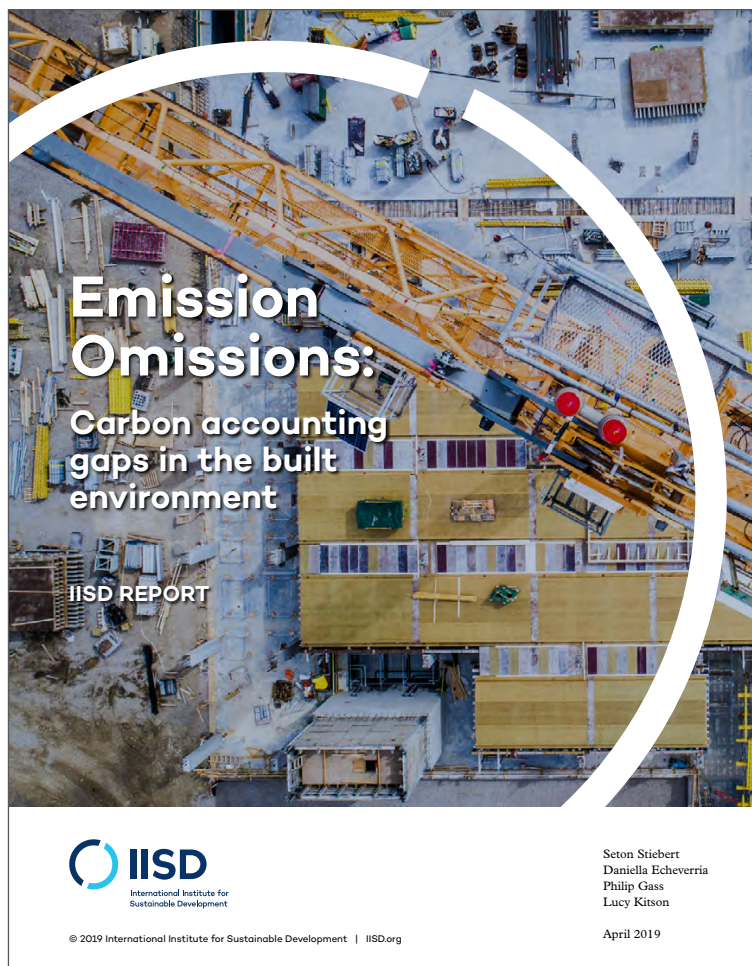


The CAC, with support from Matt Dalkie of Lafarge and Bart Kanter representing the Canadian Ready Mixed Concrete Association (CRMCA), is playing a central role in LCA² and has had a measurable influence on the agenda. Aside from investments being made by NRC in profiling market ready opportunities to identify and encourage low-carbon concrete solutions (including Portland Limestone Cement), the initiative could also represent a major step forward in our efforts to challenge assumptions about the environmental superiority of wood. Leveraging our IISD *Emission Omissions* study, we were successful in convincing NRC to establish a separate technical committee under the LCA² initiative to examine and address uncertainties with respect to accounting for biogenic carbon in LCA. The LCA² initiative represents our best opportunity to date to push for more transparent and more robust accounting of the carbon footprint of wood products.

NRC had initially proposed that the four major materials sectors involved in the LCA² project (cement/concrete, steel, aluminum and wood) provide \$50,000 per year in funding to support the initiative. The CAC spearheaded engagement with NRC to defer this funding, arguing that our sector's outsized contribution as a member of the governing Steering Committee and Technical Committees, among other in-kind contributions, was worth far in excess of \$50,000. NRC ultimately agreed and waived the industry cash contribution. These are budgeted dollars that can now be repurposed to support other critical research priorities.

Environmental Claims of the wood industry

After two years of hard work, the CAC was extremely excited to make public our groundbreaking research examining greenhouse gas emissions from the built environment and, specifically, critically evaluating prevalent assumptions about the carbon footprint of wood versus other building materials. The final report titled "*Emission Omissions: Carbon accounting gaps in the built environment*" and authored by the highly regarded International Institute for



Sustainable Development (IISD) was released in April 2019. Its launch followed months of effort to craft a meticulous communications and marketing plan, honing simplified messages and communication products with IISD and Allies across the cement and concrete value chain to maximize its impact. While, by design, almost all of the communication material was issued under IISD's brand, the CAC ensured that the report was politically impactful by publishing a hard hitting article in the Hill Times as well as by sending personal letters (co-signed by the CAC and Allies) and a backgrounder on the report to all MPs, MPPs, and key MLAs across Canada.

The report was extremely well received, in particular and perhaps most importantly by experts in the LCA community who are becoming more sensitized to the shortcomings of LCA in accounting for biogenic carbon from wood products. Of particular note, the report very quickly made its way into the hands of the 500+ members of the international Embodied Carbon Network, an unambiguous sign of the study's timeliness, relevance and credibility. As noted above, the report also played an instrumental role in NRC's decision to establish a special LCA² working group to address current deficiencies in wood carbon accounting.

The report has now withstood many months of wood industry attempts to discredit its findings. Quite simply, IISD appears to have done unimpeachable work, thanks in part to the disciplined and methodical approach the CAC took in designing the initial RFP and establishing an external advisory committee. Advisory group members also played an important role in lending additional credibility to the communication of the report by offering supportive quotes and agreeing to be interviewed in IISD's summary video of their research. In fact, this video was narrated by one of Canada's most important environmental leaders, Bruce Lourie, President of the Ivey Foundation.

We are confident that the study will continue to serve as our touchstone when advocating for less favoritism toward wood and a more robust, transparent and balanced approach to decarbonizing buildings and building materials. While government policies remain highly skewed toward wood, the report has definitely caught their attention. In fact, shortly after the publication of our Hill Times OpEd, both NRC and NRCan separately reached out to the CAC, acknowledging a need to re-balance their portfolios through more consistent collaboration with our sector. While we are unlikely to see an end to government funding and promotion of the wood industry, we believe we are now better positioned, at a minimum, to ensure that the role concrete plays in best-in-class low carbon buildings is also properly supported and acknowledged. Our goal is to move away from the language of "tall wood" buildings to "low carbon" buildings that recognize the value of all materials.

In early December we saw the release of further research supporting the findings of the IISD report, namely a report from the Wildlands League (an advisory group member on the IISD report) entitled "[Logging Scars](#)" and validating certain aspects of IISD's findings with field research. This work was supported in part by the CAC, the Canadian Precast/Prestressed Concrete Institute (CPCI) and the Masonry Design Centre. The CAC will work to amplify these third-party research findings, in collaboration with Allies.



Drone image: Trevor Hesselink, Wildlands League, [Logging Scars](#) research, 2019.

Other Miscellaneous Activities

The CAC is now firmly integrated into the sustainability and climate change policy community in Canada. We are regularly invited to speak and advise as industry and policy experts on issues such as carbon pricing, circular economy, or sustainable infrastructure, and to participate in collaborative strategy sessions on federal, provincial and municipal issues. This is an extension of our multi-year effort to work collaboratively with Canada's most influential voices, including its most important ENGOs, think tanks and thought leaders. Many of our policy successes, including those mentioned above, are helped to a significant degree by the collaborations we have, and continue to broker, with these voices. They call on us and can be called upon to help advance our respective agendas. This is a formula that works and, when nurtured, helps build a durable capacity to lead regulatory policy reforms that work for our sector. Particularly in the turbulent political times that we are experiencing in Canada today, these relationships will help stabilize our engagements with governments, regardless of their political stripe, while continuing to secure our sector's social license.



The CAC's Michael McSweeney delivers plenary remarks at the 2019 Council of Great Lakes Forum.



The CAC's Adam Auer speaks at the 2019 PNWER Summit.

Marketing Communications

Establishing concrete as the climate solution of choice requires an effective marketing communications plan and strategy. This year's objective focused on the IISD study and generating visibility and awareness of its findings and their implications for public policy, decision-makers and building professionals.

Our approach has been to deploy a broad range of communication products and tactics over a variety of channels and platforms to reach the industry's key target audiences. These efforts included editorial contributions to specialty and mainstream media; advertising and advertorial placements; conference presentations; and, promotion using social media and online platforms. We have worked closely with Allies on several of these activities and appreciate the many opportunities they have provided to leverage their channels and expand our reach.

Looking back over the course of the year and to our initial communications plan for 2019, we note the following highlights:

OUTREACH TO PARLIAMENTARIANS

As noted earlier in this report, we published a hard-hitting op-ed (accompanied by a high impact ad) in the Hill Times to capitalize on the launch of the study, reaching federal politicians and senior bureaucrats. Additionally, all MPs, MPPs and MLAs were sent a personalized letter and information positioning the IISD study and noting the importance of our industry in each of their constituencies. Co-signed by the Executive Directors of the provincial ready mixed concrete associations, the letter was accompanied by a flagship brochure combining IISD's Backgrounder on the study with the industry's viewpoint and an ad promoting exciting innovation in our sector aimed at reducing GHGs from the built environment.

OUTREACH TO MUNICIPAL LEADERS AND CITIES

All municipal decision makers attending the Federation of Canadian Municipalities (FCM) annual conference received the flagship brochure and we gained considerable advantage being included in the information kits that were provided to each conference delegate upon their arrival. A brief message about the IISD study was also included in two FCM e-communications targeted to its national membership. In January 2020, the mayors, councilors and chief planning officers of Canada's largest cities will be sent a personalized letter and brochure positioning both the low carbon advantages of concrete and the key findings of the IISD study.

TARGETING ARCHITECTS AND BUILDING PROFESSIONALS

By the end of the year, we will have reached the architectural & sustainable building community more than once. For instance, in collaboration with CPCl, we facilitated the placement of the Backgrounder of the IISD study, under the lead researcher's byline, in the summer issue of *Sustainable Architecture & Building Magazine* (SABMag). This fall, we placed a two-page advertisement in the November issue of *Canadian Architect*.

The products used for these professional placements are being leveraged and re-purposed to support other targeted outreach initiatives. In this way, our investments of time and money are being maximized and stretched to accomplish more with less.

Government policies are misdirecting efforts to reduce GHGs from buildings

The construction industry is under increasing pressure to reduce its carbon footprint. However, government policies are often misdirected, focusing on the wrong areas and ignoring the most effective ways to reduce emissions. This report highlights the need for a more holistic approach to building decarbonization, one that considers the entire lifecycle of a building and the role of concrete in achieving these goals.

Concrete is more than a material. It's about life.

Concrete is a versatile and durable material that can be used in a wide range of applications, from infrastructure to residential buildings. It is also a low-carbon material when produced using sustainable practices. By choosing concrete, we can help reduce the carbon footprint of our buildings and create a more sustainable future.

Concrete steps to a carbon-neutral future.

Concrete is a key material in the construction industry, and it plays a significant role in the carbon footprint of buildings. This report outlines the steps that can be taken to reduce the carbon footprint of concrete buildings, from the design phase to the construction and operation phases. By following these steps, we can help create a more sustainable built environment.

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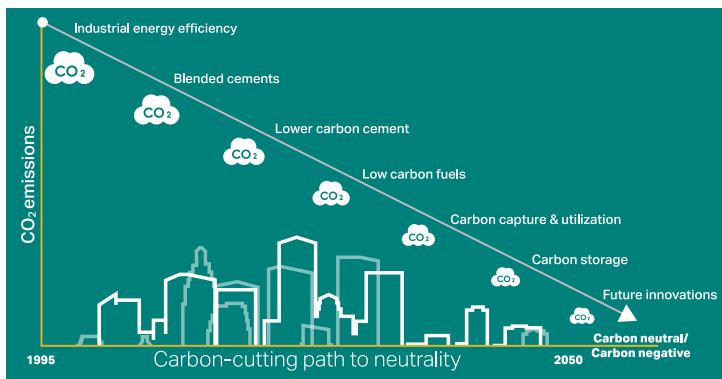
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AMPLIFYING THE LOW CARBON ADVANTAGE OF CONCRETE

Our overarching message and language promotes the distinct and unique advantages of concrete as a climate solution. Our tone is educational and informational and not adversarial with other building materials.

This language and approach are evident in our work including our advertisement in Canadian Architect magazine. In the context of reducing the carbon footprint of the built environment, this piece led with the industry's path to a carbon-neutral future, highlighted concrete's built-in advantages and outlined strategies architects can use to reduce the carbon footprint of buildings. The piece closed with a brief reminder to "mind the gap" in accounting for all carbon in the built environment, supported by a synopsis of the IISD study.



We have also used this messaging to frame a number of outreach initiatives including our workshop at the national Building show; a sold out webinar organized by CaGBC for its members; an email blast to attendees of the 2019 RAIC Festival of Architecture and, thanks to their continued support, through the communications channels of our Allies.



KEY PARTNERSHIPS AND RELATIONSHIPS

As noted elsewhere in this year's report, we have continued to support key ENGO and industry stakeholder events through our sponsorship program. This remains for us a primary means of building equity with key government decision makers, influencers and enablers. While we have scaled down our commitments given budget constraints, we believe our approach still gives us a sufficient level of visibility and ability to connect with our target audiences.



FEDERATION
OF CANADIAN
MUNICIPALITIES

FÉDÉRATION
CANADIENNE DES
MUNICIPALITÉS

TARGETED MEDIA RELATIONS

We have continued to proactively challenge inaccuracies and misleading information being promoted or circulated through mainstream media stories or trade and specialty publications. These are important communication opportunities for our industry, and it is equally important that we "set records straight" and protect our industry's reputation and that of the materials we produce. We have also actively supported mainstream media in their research to ensure accuracy in their published stories. For instance, we recently worked with journalists representing the *Toronto Star* and *Building Magazine*, taking the opportunity to convey our message and clearly present our viewpoint on the "wood vs concrete debate".

Looking to 2020

As we look to 2020, we will adjust our marketing communications strategy and activities to reflect the priorities and desired outcomes set by the CAC's Concrete as the Sustainable Building Material (CSBC) Committee and through the engagement and work with our concrete allies.

Winnipeg Free Press

THE RECORDER & TIMES

TORONTO STAR



Codes and Standards

Codes and standards are at the foundation of our work. If we cannot influence the development of codes and standards that the federal, provincial and municipal governments use, then we lose part of the battle. The CAC places a huge emphasis on the participation in codes and standards committees by CAC staff, Members and Allies. Our presence on these committees allows us to question the initiatives put forward by others, including the wood industry, and to explain and promote the benefits of concrete.

National Building Code of Canada (NBCC)

The CAC holds active memberships on three NBCC Standing Committees (Fire Protection, Structural Design and Earthquake Design) and also participates as required on the Standing Committee on Housing and Small Buildings. Key NBCC issues currently being addressed by the CAC include:

TALL WOOD BUILDINGS

A proposal for 12 storey Cross Laminated Timber (CLT) buildings in the 2020 NBCC have been debated from a fire safety perspective over the last three years at the NBCC. CAC has critically reviewed and successfully amended a number of the changes associated with this proposal. CAC has successfully imposed height limits for Tall Wood buildings as well as restricting the amount of exposed wood in the structure and instituting limitations on cladding materials as well.

EARTHQUAKE DESIGN

CAC has aggressively resisted height increases for seismic and gravity load Tall Wood systems. The wood industry is well funded and heavily supported by the NRC who have stated that the promotion of Tall Wood in the 2020 NBCC is one of their top five priorities for this Code cycle. Proposed Tall Wood seismic provisions are being critically evaluated by CAC to ensure that, if they are adopted, they meet the same exacting criteria as that of concrete and steel. This has resulted in the limitation of an "All Wood" tall wood solution to six storeys in high seismic zones and to 10 storeys in all other parts of Canada. Twelve storey wood buildings will require a concrete or steel lateral load resisting system for acceptance under the 2020 NBCC.

CAC continues to be actively engaged in the review and development of revised building seismic ductility factors and proposed performance-based design provisions in the NBCC, to ensure that concrete is treated equitably and that the best attributes of concrete construction continue to be recognized in Code. Efforts by the wood industry to compromise and or circumvent the NBCC code

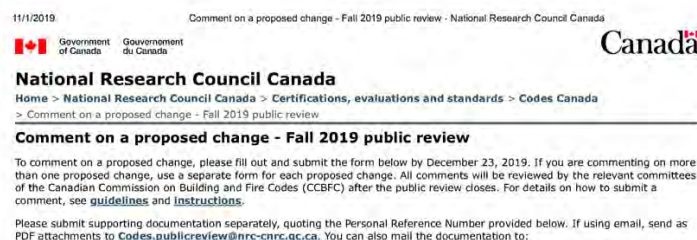
development process are being countered by CAC to ensure proper technical justification of any adopted changes for Tall Wood.

FARM BUILDINGS

CAC Chaired the NBCC Task Group on the Structural Design of Farm Buildings for the 2020 NBCC. The new provisions for Farm Buildings are now complete and will likely be sent out for public review in January of 2020. Loading specifications have been updated to current code levels and new provisions for seismic design were added. Updated cement specifications for sulphate exposure were added which will permit the use of PLC in this exposure class.

NBCC PUBLIC REVIEW

Proposed changes for the 2020 NBCC are again being made available for public review this fall through the NRCC website. CAC is again alerting its members and all allied industries of this development. As was the case in 2017, CAC will be preparing a concise summary of those proposed changes that are of interest to the Canadian cement and concrete industry and its Allies along with a description of the implication of these changes and proposed comments that could be submitted to the NRCC during this public review.



National Energy Code of Canada

CAC participated in the first meeting of the next edition of the National Energy Code. The compliance path of the next edition of the energy code will rely on building energy performance software, most notably the Hot 2000 energy program. Outside expertise will be required for the CAC to properly evaluate whether these energy programs adequately recognize the energy saving characteristics of thermal mass in their logic routines. The next cycle of the energy codes will see continued proposals to improve energy efficiency, which may provide an opportunity for concrete to have its thermal mass attributes recognized in future editions.

CSA Standards - Cement and Concrete Activities

CAC officials participate in a variety of CSA standards, including CSA A3000 Cement; CSA A23.1 Concrete; CSA A23.3 Design of Concrete Structures (as Chair of the committee); CSA S413 Parking Structures; CSA N287/291 Nuclear Containment and Safety Related Structures; CSA S304 Masonry Design; CSA A179 Masonry Mortars; CSA S478 Designing for Durability.

Current issues that the CAC is addressing through the CSA with relevance to the cement and concrete industry are described below.

- **Portland Limestone Cement (PLC):** Amendments that CAC has successfully shepherded through the current editions of both the CSA cement and concrete material Standards in 2019 have effectively removed any technical barriers to the use of PLC. This now allows for full industry conversion to PLC. This is a real plus for the industry.
- **Carbon Sequestration in Concrete and Recycled Aggregate:** A new Annex on Carbon Additions has been adopted as an amendment to the existing CSA A23.1-14 Concrete standard and in the 2019 edition as well. This technology reduces the carbon footprint of concrete without affecting its plastic properties or performance and provides the concrete industry with its own Carbon Sequestration mechanism to combat climate change.
- **Ultra-High-Performance Concrete:** For the first time since its inception, Ultra High Performance Concrete (UHPC) has been adopted in CSA Standards. A UHPC annex now appears in the CSA A23.1-19 Concrete Standard and also in the 2019 CSA S6 Bridge Design Code. These new Annexes will provide guidance to the ready mixed concrete industry and designers alike in the design, testing and utilization of UHPC.
- **Concrete Design:** The CSA A23.3-19 Design of Concrete Structures Standard has now been published and will be referenced in the 2020 NBCC. The new standard provides a clarification of wall design procedures, a refinement and simplification of the seismic design provisions, a new section on structural diaphragms and a more closely coordinated development schedule with the NBCC. The introduction of higher strength reinforcement is planned for the 2024 edition.
- **Removing Barriers:** CAC continues to work with the CSA N287/291 Nuclear Standard testing requirements to reduce overly conservative testing requirements that are a significant hinderance to the industry.

Research and Development

CAC continues to work with the NRC in developing three industry R&D initiatives with a total budget of \$3M from the federal government. These research initiatives address the NRC \$40M Climate Change Adaptation program and new Resilience program that was rolled out in 2019.

Publications

Both the *Design and Control of Concrete Mixtures* and the *CAC Concrete Design Handbook* will be updated in the 2020 timeframe to reflect the new requirements and revised specifications of the CSA cement and concrete materials standards and the CSA concrete design standard. More specifically:

- The current CAC Concrete Design Handbook references the 2014 edition of CSA A23.3 and must be updated for the 2019 edition of that Standard as it contains the Explanatory Notes to the A23.3 Standard that educators and practitioners use in applying the Standard to reinforced concrete design in Canada.
- The Design and Control of Concrete Mixtures (Publication Code: EB101) will need to be updated with the release of the new CSA cement and concrete material standards as it is now two cycles out of date and does not contain the latest information on PLC which is critical to the conversion of the Canadian cement market. This publication is the main material education text of the Association.



Markets and Technical Affairs

Economics Program/Market Intelligence

In late 2018 the decision was made to reallocate CAC resources and one of the changes was the elimination of the market intelligence function. Earlier this year the members decided to proceed with an update to the economic model CAC had been using and to run it through Statlog. Through this process it was determined that many of the issues of seeking reliable statistical inputs in the model could not be resolved, and it was determined that the CAC would discontinue forecasting consumption and instead provide members with raw data and construction trends information that could be used for everyone to make their own assessments about the state of the market. In October, the first draft revival of the CAC's Economic Monitor was presented to the Board and will be circulated quarterly from now on.

Concrete Infrastructure Promotion

In 2019, our focus for concrete infrastructure promotion continued to be the development of new opportunities and markets. Part of this effort included participating in the Transportation Association of Canada (TAC)'s project on *Best Practices for Evaluation of Soil and Material Stabilization Products*. CAC is a sponsor of this project and has been involved in the write-up of the literature review which identifies the various techniques currently available to stabilize subgrades, subbase and base aggregates and full depth reclamation (FDR) of deteriorated asphalt pavements. Cement-based solutions are identified as the most common method of stabilization techniques in both the literature review and user survey completed to date. CAC has been requested to assist in the continued write-up of the 50% and 100% draft documents due to our knowledge in this area. Once this document is completed and released by TAC in the Spring of 2020 it should make soil stabilization techniques a more recognized pavement solution option to government agencies and industrial/commercial sector personnel, thereby opening up the market for greater utilization of this technique with cement-based solutions being front and centre.

We also continue to work with provincial and municipal governments, encouraging them to allow a fair opportunity to compete. Many transportation departments specify their roads in asphalt simply because that is the way it has always been done. But research and real-world data show that a procurement process that encourages competition between paving materials lowers prices, spurs innovation and improves quality.

Conferences and Initiatives with Partners & Allies

The CAC's involvement in conferences and other initiatives is important as it allows us to put forward our ideas, author studies, and participate in committee work, all aimed at increasing the market share

of concrete pavements across Canada. Thus we continue to work with various organizations by participating in and sponsoring conferences and other events and through the design and implementation of partnerships resulting in the promotion of concrete infrastructure.

While our involvement was reduced in 2019 due to staff changes and budget reductions, we were actively involved in TAC 2019 Fall Conference, with specific input into the Construction Sub-Committee (reporting to the Maintenance and Construction Standing Committee) and the Pavement ME User Group Sub-Committee (reporting to the Pavement Standing Committee).

Research and Development

In partnership with our Allies and stakeholders, the CAC continues to support ongoing research in areas relating to cement, concrete and resiliency. This kind of research is paramount if we want to continue to ensure that concrete is considered by those stakeholders who ultimately make the decision or recommendation to use concrete pavements. Without current research, we run the risk that end users might continue to recommend asphalt pavements based on analysis and approaches that have existed for decades. Examples of where we participate include:

- **University of Manitoba — Dr. Ahmed Shalaby, Municipal Infrastructure Chair.** This research program is supported by the City of Winnipeg, the Province of Manitoba and twelve construction industry contractors, suppliers and associations. The partners work together to develop and test innovative solutions that will extend the life and durability of infrastructure, improve and harmonize design and construction practices, and reduce the risk of implementing new innovations to infrastructure owners and contractors. CAC has committed to funding \$2,000/year for 5-years, starting in 2017
- **University of Waterloo — Centre for Pavement & Transportation Technology.** CAC is under contract to fund Phase 3 R&D – \$30,000 per year for 5 years, starting 2017. This funding helps to advance concrete pavement research, but also to get project-level support from Susan Tighe and her students when needed. This relationship has been helpful in advancing the use of concrete overlays with Canadian municipalities that had not previously used this technology. The University of Waterloo has a good relationship with several different municipalities due to former graduate students working with them and in the coming year will take a more active role introducing the CAC to the municipalities and working in partnership to promote the use of concrete.



REGIONAL HIGHLIGHTS



Western Region

With two elections across Western Canada, the CAC was very active in BC, Alberta and the Prairies in 2019. In April 2019, the United Conservative Party (UCP), under the leadership of new Premier Jason Kenney, ousted the one-time NDP government in Alberta, while Premier Pallister and the PC Party in Manitoba won a second mandate and maintained their advantage in the legislature. The governing BC NDP has found its stride as they passed the mid-point of their mandate, and they continue to govern with the support of their agreement with the BC Green Party. They are helped by a relatively weak opposition in the BC Liberal party.

Carbon policy remains a contentious topic across much of Alberta, Saskatchewan and Manitoba who are the most vocal opponents of the federal backstop price on carbon. The first order of business for the UCP government in Alberta was to repeal the consumer-facing carbon tax on fuel, with a replacement program for heavy emitting industries to take effect on January 1, 2020. In British Columbia, meanwhile, the price on carbon rose to \$40/tonne on April 1, 2019 and the government continues to develop their Clean Growth Incentive Program that will allow industry to recover a portion of the tax above \$30/tonne. With an ever-changing political landscape at both provincial and federal levels, the CAC aims to remain agile and adaptive in order to work effectively with the governments of the day.

Industry Affairs

BRITISH COLUMBIA

A strong focus in BC has been on continuing to build positive relationships with Metro Vancouver and the Capital Regional District (CRD) in and around Victoria, including the Metro Vancouver Zero Waste Committee. Following a CAC presentation early in the year, this group announced a Mixed Waste Processing Pilot project that will involve the mechanical sorting and processing of residential drop-off waste at one of their facilities to produce an alternative fuel for cement plants (or other industries). The CRD is building a wastewater treatment plant, and after a comprehensive review of options, they decided to commit to supplying the plant's dried, residual biosolids for use as an alternative fuel by the cement industry.

While the attention has been on working with these regional governments, we continue to engage with key Provincial officials at both the staff and elected levels, including ongoing advocacy for the BC Minister of Environment to overturn Metro Vancouver's "Solid Waste Generator Bylaw." Metro Vancouver introduced bylaws that would require waste collection companies to collect and remit to them

a waste generator levy of approximately \$40 per tonne of municipal waste collected, regardless of the waste's ultimate destination. The intent of these bylaws is to direct all waste to Metro Vancouver owned or operated facilities. This scheme is termed "waste flow control", and similar regulatory mechanisms have been tried and generally failed in the United States. At the end of July, Minister George Heyman deferred a decision on the Bylaw until Metro Vancouver has carried out a comprehensive review of its solid waste management plan. This is expected to take between two and three years and the cement industry will have ample opportunity to provide further input.

Elsewhere, the CAC was invited once again to present on behalf of industry before the **BC Standing Committee on Finance and Government Services**. The cement industry is now well known by both government and opposition members of the Committee, and our messages on PLC, lower carbon fuels and how imported cement bypasses the BC carbon tax appear to be well understood.

The annual Union of BC Municipalities (UBCM) Convention was held in downtown Vancouver this year, with the CAC focusing efforts on short, impromptu connections with UBCM attendees that included mayors, councillors, government and opposition MLAs – a total of nearly two dozen officials over the span of two days.

With respect to the carbon tax, the BC Ministry of Environment continued its work on the Clean Growth Incentive Program, and industry has had the opportunity to provide input on the establishment of an appropriate benchmark that will ultimately be set in late Fall 2019 for implementation in 2020. Dialogue continues with staff from the BC Ministry of Environment and Climate Change Strategy, who, on the basis of a survey report prepared by Cheminfo Services Inc., have floated a GHG intensity benchmark of 677 kg CO₂e per tonne of cement, on the basis of the average of the 10% best performing cement facilities operating under the European Commission's Emission Trading System (ETS) Product Benchmarks. Conversely, the CAC and BC's cement industry have recommended that the Province look to neighbouring Alberta's TIER program benchmark (see below) of 775.7 kg CO₂e per tonne of cement for 2020.

While the intent of the program is to provide a rebate to the cement industry for the portion of the carbon tax above \$30 per tonne of carbon (the BC carbon tax is \$40 per tonne as of April 1, 2019) the industry has continued to emphasize its challenge with competitiveness with respect to imported cement that bypasses the entirety of the carbon tax.



Alberta Lobby Days – from left to right: Ken Carrusca, CAC; Jonathan Moser, Lafarge Canada Inc.; Kent Stuehmer, Lehigh Hanson; the Honourable Jason Nixon, Alberta Minister of Environment and Parks; Brad Kohl, Lafarge Canada Inc.; Michael McSweeney, CAC; and Shane Mulligan, CAC.



Alberta MLA Pete Guthrie meets with Concrete Alberta's Dan Hanson, CAC's Shane Mulligan, Lafarge Canada Inc.'s Jonathan Moser and Lehigh Hanson's Kent Stuehmer.



Lafarge Canada Inc.'s Jonathan Moser, Lehigh Hanson's Kent Stuehmer, CAC's Ken Carrusca meet with the Honourable George Heyman, BC Minister of Environment and Climate Change, to discuss the Clean BC Program.

PRAIRIES

The *Carbon Competitiveness Incentive Regulation* (CCIR), which applies to heavy emitters like the cement industry, was implemented on January 1, 2018 by the former Alberta NDP government. The regulation was premised on an output-based allocation system with a benchmark for the cement industry that acknowledged Alberta's two facilities as top-performing in Canada. In May 2019, the newly elected UCP government repealed the Carbon Tax as it applies to fuel and the broader public, and indicated they would replace the existing CCIR regulation for heavy emitters with a new *Technology Innovation and Emissions Reductions (TIER) Act*.

Over the summer of 2019, the CAC attended several stakeholder sessions on the development of the TIER program, including interactions with Minister Jason Nixon. Indications to the industry had been that the TIER program would follow a "do no harm" approach, with the cement industry expected to fare similarly to the CCIR benchmark in a credit-earning position. Ultimately, the TIER regulation was introduced at the end of October, with the establishment of a GHG benchmark of 775.7 kg CO_{2e} per tonne of cement. This benchmark will take effect January 1, 2020, and will remain static until the next compliance period (January 1, 2023). While the benchmark declined slightly compared to the CCIR, the result is significantly better than the

federal OBPS of 733 kg CO_{2e} per tonne of cement and the 10% facility-based reduction originally outlined within the UCP campaign platform.

In November 2019, the CAC, alongside Concrete Alberta and representatives from Lafarge and Lehigh, held its annual advocacy days in Edmonton. With a newly elected government in the legislature, this year's meetings focused on building new relationships with key government ministries, including Environment and Parks, Transportation, and Infrastructure. Earlier in the year, with the support and guidance of New West Public Affairs, the CAC was active in attending many politically focused events over the course of the Calgary Stampede and Edmonton's K-Days, which facilitated discussions with Premier Jason Kenney, Minister of Energy Sonya Savage, and Minister of Transportation Ric McIver. Together with Concrete Alberta, meetings have also been held with the Minister of Transportation's Ministerial Assistant, the Chief of Staff to the Minister of Red Tape Reduction, and the Minister of Municipal Affairs.

Topics of discussion included the importance of low carbon cement, concrete pavements, and lifecycle thinking in procurement practices. With the establishment of the Ministry of Red Tape Reduction, much of the CAC's messaging to government has also focused on opportunities to advance initiatives on PLC and low carbon fuels along with waste management policies.

Markets and Technical Affairs

BRITISH COLUMBIA

Throughout the year, the CAC dedicated considerable effort towards meeting with local Mayors and Councillors who are members of Metro Vancouver's Zero Waste and Climate Action Committees, educating them on cement, concrete and opportunities to collaborate with respect to the use of waste materials as alternative or lower carbon fuels. Partially as a result of these efforts, Metro Vancouver announced that it was pursuing a pilot project to process waste from its own residential drop-off facilities. Although longer term, this project is a positive development with respect to collaboration with Metro Vancouver.

The cement industry was a sponsor and attendee at the annual Fraser Riverkeeper dinner in Vancouver in September. Our industry's support for this well-respected, non-profit organization helps with respect to our social license to operate, particularly with both local cement plants located adjacent to the Fraser River and being heavily dependent on it for the transport of raw materials, clinker and cement. The event also provided an opportunity to speak with several attendees from local government.

In addition to describing opportunities to collaborate with Metro Vancouver, the meetings with Mayors, Councillors and other local government officials provided numerous opportunities to discuss PLC and advocate for its use. There continues to be a lack of awareness of the GHG benefits of PLC, with the City of Vancouver being an exception that has offered to endorse the product as necessary.



PRAIRIES

The CAC was a platinum sponsor and supporter of the Pacific NorthWest Economic Region (PNWER) Annual Summit, held in Saskatoon, Saskatchewan from July 21-25. Over 500 regional legislators, business leaders, and key decision-makers came to share challenges in the region, discuss best practices, promote regional relationships, and develop an action plan for addressing these challenges in the coming year. As a result of targeted sponsorships, the cement and concrete industry were well represented with speaking opportunities at both breakfast and dinner receptions, as the Pacific Northwest Building Resilience Coalition and the CAC, respectively, had the chance to address delegates directly.

On the concrete pavements file, the CAC was active in Alberta, working with local consultants and Alberta Transportation (AT) to educate the industry on best design practices. With concrete alternative designs now mandated in select applications for AT tender projects, there has been an increase in interest and outreach from industry, with the CAC reviewing designs and putting on lunch and learn sessions, as required. Additionally, as a result of several years of consultations with Alberta Transportation and an alternative bid submitted by a local contractor, the lane expansion of the Southwest leg of Anthony Henday Drive in Edmonton will be constructed with concrete, beginning in 2020.

CAC staff completed a detailed review of the Tetra Tech Pavement Design Report for Alberta Transportation (AT) on the Wolf Creek Safety Rest Area Concrete versus Asphalt Pavement Analysis Report. The review showed numerous issues in the pavement design details such as jointing, tie bar usage, and excavation details. Several issues were also identified in the pavement thickness design and StreetPave 12 thickness design software runs were completed to demonstrate how the pavement design could be optimized for the truck and car parking areas. A detailed review was completed on the report LCCA section identifying several inaccuracies in the analysis and recommended changes to better reflect the true LCCA for the pavement comparison. The review also identified the need to treat the designs for the entrance and exit areas different from the truck and car parking areas. The CAC comments were reviewed by AT and discussed with CAC in November with a decision pending on calling an alternate bid tender. The final recommendation of the review suggested AT host a concrete pavement design course with CAC assistance to help local designers better understand how to complete concrete pavement designs to ensure equivalent pavement designs are being considered when comparing asphalt and concrete pavement options. The department has agreed to host a course in January or March of 2020 with CAC organizing the event.

In Saskatchewan, a concrete pavement workshop was put together by Concrete Sask on October 24, 2019, with the Cement Association of Canada presenting on several aspects of pavement design, alongside speakers from Thurber Engineering and Canadian Council of Independent Laboratories. Attendance included over 40 representatives from a wide range of interest areas, including Saskatchewan Ministry of Highways and Infrastructure, the City of Saskatoon, local engineering consulting firms, and concrete suppliers. Meanwhile in Manitoba, a similar workshop is scheduled to take place in Winnipeg in early 2020 in partnership with Concrete Manitoba, the City of Winnipeg, and Manitoba Infrastructure and Transportation.



Ontario Region

Industry Affairs

The first year of the Ford government has been described by some as tumultuous – marked by a desire to show fast action but ultimately followed by several reversals in policy and budget decisions after public backlash. Following a contentious and poorly received first spring budget the Premier announced a major cabinet shuffle of key ministries in early summer and also removed his controversial Chief of Staff.

The government extended its summer legislative break until after the federal election allowing new Ministers the time to get up to speed on their portfolios and for staff to get settled into new positions. When the legislature resumed on October 28th the Premier promised a new, less confrontational tone in an attempt to set this new session on a more solid course.

ONTARIO LOBBY DAY

The CAC hosted its 2nd Ontario Lobby Day with the Ford government on Monday, November 4th. A year into the government's mandate, this lobby day targeted meetings with the Premier and Ministers in our key Ministries of Environment, Transportation, Labour and

Infrastructure. All of the Ministers in these Ministries have changed over the past year and it was an opportunity to reinforce how our priorities align with the key priorities of government. We also met with the Deputy Minister of the Environment and the Leaders of the Opposition parties throughout the day.

Similar to other years, the day finished with the annual Cement Mixer in the Legislative Dining room. Over 250 MPPs, staff, and officials attended the mixer with cement and concrete allies.

GOVERNMENT RELATIONS ACTIVITIES

The CAC has spent the past year developing relationships with the new government and their staff. Following the Cabinet shuffle in June, the CAC sent letters of congratulations to the new Ministers and set up meetings in July and August to meet with them and outline key priorities in their ministries.

Our government relations strategy evolved over the past year, but remained focused on:

- Delivering solutions that stimulate the economy, create jobs and protect taxpayer investment;



Ontario Lobby Day: Premier Doug Ford with, from left to right, Michael McSweeney, CAC; John McCabe, Lafarge Canada Inc.; Kevin Machej, Dufferin Construction; John Pontarollo, CRH Canada; David Redfern, Lafarge Canada Inc.; Filiberto Ruiz, St Marys Cement; Steve Gobbatto, CBM; the Honourable Laurie Scott, Minister of Infrastructure; and Martha Murray, CAC.



Ontario Lobby Day: The Honourable Caroline Mulroney, Minister of Transportation with Michael McSweeney, CAC; Steve Gobbatto, CBM; David Redfern, Lafarge Canada Inc.; Filiberto Ruiz, St Marys Cement; John Pontarollo, CRH Canada; John McCabe, Lafarge Canada Inc.; and Kevin Machej, Dufferin Construction.



Ontario Cement and Concrete Mixer: Mixer sponsor Leslie Clark, MPP for Durham with CAC's Martha Murray and St Marys Cement's Filiberto Ruiz.



The Honourable Monte McNaughton, Minister of Labour, Training and Skills Development with, from left to right, Michael McSweeney, CAC; John Pontarollo, CRH Canada; John McCabe, Lafarge Canada Inc.; Bart Kanter, Concrete Ontario; Filiberto Ruiz, St Marys Cement; Kevin Machej, Dufferin Construction; Steve Gobbatto, CBM; and Martha Murray, CAC.

- Promoting innovation to enhance competitiveness and attract investment to Ontario facilities resulting in Ontario jobs; and
- Protecting the environment for future generations by embracing innovation and focusing on initiatives that deliver results and build climate-resilient communities.

Our specific objectives included:

1. Promoting the use of low carbon fuels and the need to modernize waste policy to reduce emissions;
2. Reinforcing the role Portland Limestone Cement (PLC) could play on reducing GHGs at no cost to the taxpayer if mandated on all publicly funded infrastructure;
3. Promoting our red tape and regulatory burden reduction ideas;
4. Advocating for the exemption of fee increases for aggregate used in cement manufacturing and aggregate that does not travel using any public infrastructure;
5. Advocating for the use of the 'three-screen' lifecycle approach on all publicly funded infrastructure;
6. Promoting the results of the IISD study and the need for a robust lifecycle analysis; and
7. Educating decision makers on the resiliency features of concrete infrastructure.

Over the past year we have taken the time to develop strong relationships in the Ministries we deal with and have also made additional efforts to update our 'cement MPPs' to ensure that they are aware of our key priorities and able to actively promote them with their colleagues.

Carbon Tax & Climate Change

As expected, after the Ontario government cancelled the cap and trade program last year it initiated a legal challenge to the federal carbon pricing system. Ontario joined several other provinces in this fight and these efforts are ongoing.

In an attempt to achieve equivalency, and therefore not be subjected to the federal carbon tax, the government proposed its own Emissions Performance Standard (EPS) in early 2019. The CAC participated in sector specific negotiations on the EPS in early 2019 and made a formal submission where we expressed support for Ontario's approach. Despite the work completed by our companies and the Ministry, to date the federal government has not accepted the program as equivalent. With the re-election of the federal Liberal government it is anticipated that the federal carbon tax will continue to apply to Ontario.

We have also been advocating over the past year for an Emissions Reduction Fund (Ontario Carbon Trust), an item that was highlighted in the government's spring budget. We have stressed with both the Ministry officials and the Ministers' office staff the ability of such a fund to attract new investment directed toward innovative low carbon technologies. While the government appears supportive of such a fund, it is unclear where funds will come from if the EPS is not accepted by the federal government. The federal government is currently directing proceeds from the carbon tax to their own identified priorities without the input of the province.

Red Tape and Regulatory Burden Reform

This government initiative continued to take priority and the CAC has promoted our submission in several meetings this year with the Premier's office, the Deputy Minister responsible for Red Tape and Regulatory Burden Reduction, and the Chief of Staff to the Minister responsible for Red Tape Reduction. The top three items in our submission are: mandating PLC on all publicly funded infrastructure investments, the use of low carbon fuels and a modernized waste policy, and the adoption of the three-screen approach to lifecycle costing. These three items were also highlighted when the CAC appeared before the Standing Committee on Finance and Economic Affairs as part of the annual pre-budget consultations in January 2019.

Priority Policy Focus with the new Government

Low-carbon fuels: The CAC has met with the Ministry of the Environment, Conservation and Parks both at the political level and the bureaucratic level to talk about streamlining the approval process to facilitate the use of low-carbon fuels at cement facilities. Most recently, the CAC hired Golder and Associates to do an analysis of regulations/legislation that are barriers to the adoption of low-carbon fuels in Ontario and Alberta and provide recommendations that could facilitate greater use. In meetings we have contrasted the Ontario process with the process in BC which is much more streamlined and takes a risk-based approach. We continue to work through the issues with the Ministry.

Modernized waste policy: To facilitate the use of low-carbon fuels the CAC has also placed a focus on promoting a modernized waste policy that reflects a circular or non-waste economy. This was highlighted in our submission to the Ministry discussion paper on 'Reducing Litter and Waste in our Communities'. Through the use of low-carbon fuels in the cement kilns we have highlighted how we can play an important role by recovering resources from waste and ensuring they continue to have economic and environmental value. We encouraged policies that recognize, incentivize and reward the diversion of these waste streams to our sector.



Portland Limestone Cement (PLC): This year saw significant movement on the removal of all barriers to the adoption of PLC by the government. Working with Concrete Ontario and CAC members, the Ministry of Transportation has made changes that would remove any restrictions to the use of PLC in sulphate exposed environments. This removal assists with our push to mandate the use of PLC on all publicly funded infrastructure. We continue to stress that this is an opportunity to reduce GHGs by 10% at no cost to the taxpayer.

Aggregate Fee Exemptions: Over the past several years we have been advocating for the exemption of aggregate fee increases from any aggregate used in cement manufacturing. We have expanded that request to include any transported aggregate that does not make use of any public infrastructure (ie. by boat). The CAC joined Concrete Ontario and the Ontario Stone, Sand and Gravel Association in March 2019 at an Aggregates Summit where this point was reinforced with the Minister. We continue to make submissions and work with the Minister's office to achieve this exemption as part of the government's initiative to reduce red tape and regulatory burden. The Minister's office has signaled that changes to the Aggregate Resources Act are coming in 2020.

Other Submissions to Government: Throughout the year we made several submissions to promote our position to the government. This included:

- *Toxics Reduction Act* (January 2019)
- Made-in-Ontario Environment Plan (January 2019)
- Emissions Performance Standard (March 2019)
- Reducing Litter & Waste (April 2019)
- Aggregate Reform (May 2019)
- Industrial Electricity Pricing (June 2019)
- Proposed Amendments to the *Aggregate Resources Act* (November 2019)

Other Activities

This year marked the first year of a formal relationship with Concrete Ontario to assist with their government relations activities. The CAC worked in partnership with Concrete Ontario to address several concrete specific issues and will be developing a new government relations plan for 2020 to build on that work. The CAC presented at both the Concrete Ontario annual convention and the Concrete Ontario AGM in October 2019.

Markets & Technical Affairs

In 2019 we successfully advocated for, and achieved the removal of all barriers to the use of PLC. The remaining restriction which prohibited use in sulphate-exposed environments was removed this past year. The Committee and members now are focused on advocating for PLC to be mandated on all government funded infrastructure projects at both provincial and municipal levels.

We continue to build relationships with our Allies, municipalities, consultants and developers to actively promote cement and concrete. We are active in several committees such as Concrete Ontario, ORBA Structures Committee and the Ontario Masonry Training Centre.

This year we have also undertaken a review of the Ontario Pallet Recycling Program with the view to making it a self-sustaining program over the next couple of years. Our analysis indicates that the program has achieved success keeping pallets out of landfills and calls to the hotline have decreased significantly since the beginning of the program. We have engaged a consultant to help with this transition.

We also continued to provide expert advice to our Allies in 2019. For example, as part of our work within the Ontario Good Roads Association (OGRA) Concrete Advisory Committee, CAC staff acted as a key reviewer of the draft *Municipal Concrete Pavement* document prepared by Concrete Ontario. This guide was developed to provide local examples of concrete pavement opportunities in Ontario, as well as construction methods used to complete projects. The document is interactive and contains embedded videos and project details to allow the user to be immersed into the project's details. In addition, the guide offers an extensive compilation of documents used in the cement and concrete industry in the United States and Canada to help practitioners understand concrete pavement design, construction and overall best practices. The document has OGRA, Concrete Ontario and CAC logos on it and was distributed at the Municipal Engineers Association Workshop and Annual General Meeting in late November.



Quebec and Atlantic Region

Industry Affairs

The CAC continued to be active in engaging with the Quebec Government on a number of initiatives in 2019. This year's critical files for the cement industry included the proposed elimination of thermal coal by 2030, the development of the rules for the cap-and-trade program beyond 2023 and the modernization of the provincial environmental authorization regime under the renewed Environment Quality Act. We are also working relentlessly to increase our market share with respect to buildings and pavements.

Working with partners is equally important for the CAC. As a Board member of CPEQ (Quebec Environmental Business Council), and a key player in CPEQ Air & Climate Change Committee, we took advantage of numerous meetings and opportunities throughout the year to discuss government programs and policies with other industry sectors, identify common concerns and develop joint strategies when appropriate.

Along with our Members, we held a meeting of the CAC-MELCC Joint Committee in May, in addition to other engagement activities on specific files throughout the year. This joint committee is critical in advocating to and educating government officials on our industry and how our sector can remain competitive in Quebec. We also engaged with political staff as well as with senior management from key ministries (MELCC, the Ministry of Energy and Natural Resources (MÉRN), Ministry of Economy and Innovation, Treasury Board Secretariat and the Ministry of Finance). This allowed us to remain on top of government initiatives and exchange with key government officials on vital ongoing environmental and energy files affecting our industry.

GOVERNMENT RELATIONS

The election of a new Government in October 2018 brought the need to rebuild our relationships with elected officials and their staff. After sending congratulations letters to the new Premier, to the MNAs for the ridings with CAC cement plants and to key Ministers (environment, transportation, natural resources, treasury board, infrastructure and finance portfolios) in late 2018 to introduce our industry and identify challenges and potential opportunities, we initiated more focused discussions with Ministers, their staff and senior bureaucrats in 2019.

In January 2019, we tabled a formal submission to the Minister of Finance as part of the pre-Budget consultations. Our submission highlighted the key challenges we are facing as an industry, our

actions to reduce our environmental and carbon footprint, as well as some opportunities for our industry to contribute to cost savings for the government infrastructure building and maintenance, in particular roads and highways.

In collaboration with our Allies (Association Béton Québec, Tubécon, Institut d'acier d'armature du Québec and Association des entrepreneurs en coffrage structural du Québec), we held two Lobby Days on the Hill on March 26-27, 2019. A total of 27 meetings with elected officials from all political parties, as well as senior bureaucrats, were held during these two days. The purpose of these meetings was to introduce the cement and concrete industry, highlight our contribution to the economy and our commitment to sustainability. Several follow-up meetings were held later in the year to discuss specific issues, as described below.



At the Lobby Days on the National Assembly Hill, from left to right: Martin Voyer, Tuvico-Fortier2000 (representing Tubécon); Nicolas Paradis, Lafarge Canada Inc. (representing ABQ); Éric Lefebvre, MNA for Arthabasca and government Whip; René Drolet, CAC; Marco Santorielle, Coffrages Santco (representing l'Association des entrepreneurs en coffrage structural du Québec); and Stéphane Caron, Lafarge Canada Inc.

QUEBEC'S CAP-AND-TRADE PROGRAM POST-2020

Regulations setting the details of the cap-and-trade regime from 2021 to 2023 have been promulgated in 2017. After comprehensive engagement with government officials, this new regime ended up being mostly acceptable to the cement industry. However, it sets the

rule for a short period of time only which means that negotiations had to resume rapidly to develop the regime post-2023. CAC officials, along with Members, participated in the Government's pre-consultation sessions on this topic in September 2019 and we are still in the process of negotiating with government officials with respect to the proposed rules.

The cement sector has been recognized by the Government as being one of the most vulnerable to external trade and the proposed free allowances reductions are smaller than for other sectors. Our preliminary analysis indicates that the financial consequences on cement manufacturing facilities would still be dramatic and unacceptable. The complexity of the formula put forward by the Government, coupled with the addition of new factors that will be evolving throughout the period, also create uncertainty around future requirements, which may discourage major investments in Quebec plants from the multinationals that own these plants. The CAC sent a letter to the Government in November and some of the Members are planning to have bilateral meetings with government officials in December to discuss their situation and highlight the implications of the proposed reduction of the free allowances between 2024 and 2030. We also highlighted some flaws in the suite of accompanying measures that the Government is proposing to help the industry comply with the GHG emission reduction requirements. The first two or three months of 2020 will be very busy for the CAC and members as the Government intends to publish the proposed rules in the *Gazette Officielle du Québec* in the Spring for a formal 45-days consultation period.

MODERNIZATION OF THE ENVIRONMENTAL AUTHORIZATION REGIME

This file required a lot of attention from the CAC and its members in 2019. In March 2017, the Government of Quebec adopted a legislation amending its *Environment Quality Act*. A key feature of the renewed Act is the modulation of environmental authorizations according to the risk to the environment. In other words, some activities that currently require a lengthy authorization process could become subject to a streamlined process in the future if the environmental risks are deemed to be low. The CAC has been actively involved in these discussions for a number of years and presented a formal submission to a Parliamentary Commission in 2016. We worked with Member companies in 2019 to identify which activities could be subject to a streamlined process and engaged with government officials and political staff throughout the year.

In addition to the modulation of authorizations according to the risk, there seems to be a genuine intent from political staff to streamline the authorization process and make it shorter. Despite the openness displayed by government officials and comprehensive discussions,

concrete improvements have not materialized yet. The CAC is in regular contact with Minister Charette's office and we also work with Members to support them in their own discussions with government officials. It is expected that some changes in the environmental authorization processes will be announced in the Spring 2020 so this remains a critical file for us.

ENERGY POLICY 2030

Quebec's *Energy Policy 2030* was released in 2016. The main expected impact on the cement industry is the proposed elimination of thermal coal by 2030. This policy would mean that cement plants would no longer be allowed to burn coal in their kilns by 2030, unless they can capture and sequester (or re-use) carbon to offset GHG emissions associated with burning coal. The Government recognized that such an objective will have a significant impact on the industry and agreed to create a working group to identify the related challenges and to develop solutions to help the industry. The CAC and its members have been involved in this working group since its inception in 2018.

In addition to the large working group, the Government has offered bilateral meetings with each affected industrial facility in order to discuss the detailed impact of the coal elimination on the plant's operation. The CAC worked with Members to organize these meetings and present all relevant information to government officials. Bilateral meetings with the Deputy Minister responsible for this file were held in August 2019. Both CRH Canada and Lafarge Canada had such a meeting which also involved the CAC as a participant. Overall the meetings were positive. Government officials showed a keen interest in understanding these impacts and committed to work towards solutions in the coming months. It is expected that the Government will develop potential avenues of solution and will reconvene industry players for more solution-focused discussions in early 2020. Government officials seemed to be interested in understanding better the feasibility and implications (technical and financial) of transitioning cement plants to natural gas, which may be a key focus of future discussions.

MARKETS AND TECHNICAL AFFAIRS

QUEBEC

An important part of our activities is aimed at promoting the sustainability and durability of concrete infrastructure. This is done through education on lifecycle analysis and lifecycle cost analysis.

Two years ago, the CAC commissioned AppEco, an economic consulting firm, to conduct a study on the cost-benefit analysis of pavement procurement policies in Quebec. The main objectives of the study were to summarize the state of knowledge of the economic performance of the two major types of road surfaces,

asphalt and concrete, and assess the potential savings that would result from optimizing road surfaces in future work, both in total and distributed for individuals, businesses and the Government of Quebec. The report concluded that concrete pavements are not only economically efficient over the lifecycle of the road infrastructure, but that in certain cases, even the initial cost is competitive. We continued to present this study to government officials in 2019, notably through a meeting with the office of Minister Dubé (Treasury Board) in late October. We are planning to go back to the Ministry of Transportation with this study in early 2020. Our main goal is to influence government procurement policies and practices to allow for “alternative bids” for roads and highways construction and maintenance projects.

On the building side, CAC officials in Quebec have supported the Canada-wide communication effort centered around the findings of a recent study by the International Institute of Sustainable Development (IISD), which was commissioned by the CAC. The study challenges the claims of the wood industry about the low-carbon content of their products. The summary of the study has been shared with numerous government officials during meetings, in addition to the nationally-led distribution of the report by the CAC. We also presented the summary of the study to our Allies through various venues, including the ABQ Annual Summer Congress and through webinars.



The CAC also continued its strong partnership with Équiterre in 2019 and was a major sponsor of the organization's Grands Cocktails

events in Montreal and Quebec City in the Fall. These events were attended by over 800 people, including several provincial Ministers and business leaders. CAC members and Allies attended the events.

ATLANTIC

For the first time in several years the CAC, in partnership with Lafarge and Atlantic Concrete, held two lobby days in Fredericton and Halifax at the end of November. Meeting with elected representatives and members of the civil service, we introduced the industry to government officials highlighting our significant impact on jobs and the economy in the Atlantic provinces. We promoted the use of cement and concrete as a way to achieve climate change goals through the transition to low-carbon fuels, use of PLC, and the application of a three-screen lifecycle approach on all infrastructure investments. We also highlighted our innovations and cement and concrete's role in building resilient infrastructure, including concrete intersections, roundabouts, and roadways. Over the two days we had eight meetings with representatives from key ministries including Transportation and Infrastructure, Environment, Labour and Advanced Education, senior representatives in the Premier's office, and members of the opposition parties. The days concluded with a first-ever 'Cement Mixer' reception in Halifax attended by Cabinet Ministers, MLAs, and staff from the Premier's office and the Office of the Leader of the Official Opposition.



Atlantic Cement and Concrete Mixer: Pam Woodman, Atlantic Concrete Association; the Honourable Iain Rankin, Nova Scotia Minister of Lands and Forestry; Robert Cumming and Travis Smith, Lafarge Canada Inc.



ACA's Pam Woodman, the Honourable Lena Metlege Diab, Nova Scotia Minister of Immigration and Minister of Acadian Affairs & Francophonie; the CAC's Martha Murray; and Ashley Mataya, Department of Advanced Education and Labour.

Some Closing Snapshots

