



2018

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 *Main image*: Environmental Science & Chemistry Building - University of Toronto, Scarborough, ON (Diamond Schmitt Architects). *From top to bottom*: Calgary Public Library, Calgary, AB (architects: Snøhetta and DIALOG); Vancouver House, Vancouver, BC (architect: Bjarke Ingels Group); Ottawa Confederation Line — Blair Station, Ottawa, ON (architect: IBI Group); Maison du développement durable, Montreal, QC (Menkes Shooner Dagenais Letourneux Architectes); concrete pavement, Spragues Road, County of Essex, ON; concrete pipes, Calgary, AB.

Message from the President and CEO



Dear Board Members and Colleagues,

At this time each year, it is my pleasure to report to you on the work we have done over the preceding 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 have seen one change in our membership, as Colacem Canada is no longer a member of the CAC as a result of their Quebec plant being acquired by LehighHanson earlier this year. On the governance side, we also welcomed a new Chairman in February – Brad Kohl, President of LafargeHolcim West – who will serve until February 2019.

In 2018, the expected growth in Portland cement consumption did not fully materialize. It has been variable across the country and even negative in some parts of Canada. Despite encouraging signs in the Prairies, the overall cement consumption is forecast to rise marginally this year. Our biggest concern is the lack of infrastructure funding promised by all levels of government, which has yet to translate into a much higher demand for cement or concrete across the industry.

The battle that has formed between the federal government and some Provinces on the federal carbon pricing backstop plan is currently front and center in our industry's key challenges. It has created a policy void and significant uncertainty in Ontario, and it is expected to result in a similar situation in Alberta after the May 2019 provincial election. The impact on cement manufacturing facilities is significant and worrisome.

This year also saw the election of new governments in Ontario and in Quebec. In both cases, the long-standing incumbent Liberal governments were replaced with new governments promoting progressive-conservative agendas. While these new governments may create positive opportunities for our industry in the longer term, the current transition periods are challenging as we have to develop new working relationships with freshly-elected officials. We have already made significant progress with the Ford government in Ontario since its election in June and we are currently making our first contacts with the Legault government in Quebec, which was elected just a few weeks ago.

Building stronger and more collaborative relations with our Allies has remained a key objective again this year. We continued to work closely with our Members and continuously engaged with our Allies, directly and through the Concrete Council of Canada (CCC). In the spirit of alignment and harmonization of activities between the CAC and the Concrete Allies, we introduced in June a new **CONCRETE | Build for life** microsite that conveys the essence of concrete's value proposition in a highly visual, "easy-to-digest" way. We also developed the *Cement and Concrete Communications Resources Guide*, which was distributed to our Members and Allies last summer, in order to promote the use of consistent messaging across the industry in our communications with governments and stakeholders.

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 offered a series of eight technical seminars on concrete pavement across Canada with an additional session planned for early 2019. Our work on codes and standards has provided clear benefits to our industry again this year. Of particular importance was the adoption of an amendment to the CSA A3000 Cement Standard and the CSA A23.1 Concrete materials standard that will now allow our industry to convert fully to Portland Limestone Cement (PLC). I believe this is one of the most positive news of the year and it is directly related to our relentless work on codes and standards committees.

Much work progressed on the science-based approach to counter the environmental claims of the wood industry. In particular, the study we commissioned from the International Institute of Sustainable Development (IISD) was completed and confirmed that the wood industry does not fully disclose the GHG-related impacts of wood products over their full life cycle. The results of this study, which were reviewed by an independent panel of experts, will be central to our efforts in 2019 to position concrete as the sustainable construction material of choice.

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. For example, representatives from four different ENGOs were part of the advisory panel for the IISD study.

2018 was a very significant year in federal climate policy and the CAC was thoroughly engaged on all fronts. Since the Ontario government decided to repeal its cap-and-trade program, cement plants in that province will be subject to the federal carbon pricing backstop plan as of 2019. While the final details of the federal plan are still pending, the CAC has secured significant wins over the course of its development. Specifically, cement was one of only four sectors to have their carbon intensity benchmarks moved from the originally proposed 70% production weighted national average to 90%. This one change will save cement facilities over \$124 million over the next four years in Ontario alone. We continue to press hard on the need to exempt process emissions and remain hopeful that government officials will support our demand, considering that if Canada were to tax process emissions, it would be the only jurisdiction in the world to do so. This is the most important policy issue for the CAC and even more so as Alberta is approaching its May 2019 election and could very well become subject to the federal backstop if Jason Kenney's United Conservative Party (UCP) is elected as the polls suggest.

The other major federal climate file that received significant attention in 2018 is the federal Clean Fuel Standard (CFS). In April, we wrote a strongly worded letter to the Minister expressing significant concerns and were relieved shortly thereafter when ECCC adjusted the CFS timelines and approach, in part to more adequately consult on competitiveness issues. 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.

The CAC's continued efforts in engaging and working with governments across Canada have resulted in several key achievements in 2018. In Ontario, we made a number of proposals to the new government in the context of the Red Tape Reduction and Regulatory Reform agenda. We are expecting to see the results of this initiative in 2019 and beyond. In Alberta, as a result of our work and communications efforts, Alberta Transportation has included new language in their Requests for Proposals (RFP) for consulting engineers to consider concrete pavements. Essentially, all roundabouts in Alberta must now consider both asphalt and concrete alternatives, and concrete overlays are highlighted as

a recommended practice for slow-moving traffic intersections. In Québec, the economic study on pavement realized in 2017 already produced some positive outcomes. Further to our efforts to communicate the results of this study to government senior bureaucrats and elected officials, the Coalition Avenir Québec (CAQ) publicly supported the study and stated last spring that if elected, a CAQ Government would change its procurement policy to move beyond the initial cost and consider cost throughout the lifecycle of the road infrastructure, which will result in an increase in concrete pavement. We are planning to use these statements as leverage in our discussion with the new Minister of Transportation in the coming weeks.

In 2018, we continued to dedicate time and effort towards a "three-screen approach" to infrastructure funding and to promote this approach to 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 the three screens – full lifecycle cost, lowest carbon footprint building materials, and best available solutions – during the infrastructure decision-making process. We are making progress with this approach. Ontario's Long Term Infrastructure Plan announced in 2017 was referring to lifecycle cost analysis and we are currently advocating to the Ford government, asking them to adopt and implement this plan. At the federal level, the government is requiring that large infrastructure projects be assessed using a "Climate Lens" which is a direct result from our advocacy. In addition, the National Research Council (NRC) has initiated some work supporting this initiative. In effect, NRC is amassing the data and developing the tools that governments and private sector actors will need to implement a three-screen approach. We believe this work is being undertaken as a direct result of our tireless advocacy on this issue.

As you can see, we have many achievements to celebrate and be proud of in 2018. However, we need to redouble our efforts to protect our social license to operate and create a culture of concrete across our vast country, enhance the visibility and credibility of the cement and concrete industry, and deepen and broaden our partnerships with our Allies. The coming year will bring its own unique set of challenges and opportunities, as climate policies get further detailed by the federal and provincial governments. In particular, we will need to work closely with the federal government as they start to implement their carbon pricing backstop in Ontario, and eventually in Alberta. We will also make sure that the provincial governments in these Provinces understand the specific challenges of the cement and concrete industry as they develop their own climate plans.

A photograph of a modern concrete building with a large, illuminated staircase and a person standing nearby. The building features large, textured concrete panels and a prominent, illuminated staircase leading up to a large, rectangular opening. A person in a light-colored coat stands to the right, looking towards the building. The sky is overcast.

National Highlights



Industry Affairs

CAC staff and Members continued to participate in significant policy development on air quality issues in 2018. We are proactively 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) Air Management Committee develop ambient air quality standards for various air pollutants. As part of this initiative, the CAC worked in close collaboration with other industry sectors this year on the review and update of standards for ground-level Ozone. Through our involvement in this group, we were instrumental in convincing the federal government to keep the existing ozone standard for 2020, set a 2025 standard that is acceptable for the industry and more

importantly, abandon its original plan to set a standard for 2030.

The CAC representative successfully argued that setting a number for 2030 without reliable supporting data was unfair to industry and that discussions around a 2030 standard should happen in the next review cycle in five years.

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). Since 2013, CAC members have been reporting using the Cement Sustainability Initiative (CSI) Protocol 3.04. 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. In 2018, there were a few proposed changes to the NPRI that could affect cement plants. CAC officials worked with plant operators in order to provide ECCC with information that will help government assess the impact of these potential changes. For example, information on the number and heights of stacks across Canada has been collected to ensure that government decision-making is supported by reliable information.



From the left: CRH Canada Mississauga plant; St Marys Cement Bowmanville plant (top); Ciment Quebec Saint-Basile plant (bottom); Lehigh Hanson Delta plant (top) and Lafarge Canada Exshaw plant (bottom).

Sustainability and ENGO Strategy

Federal Initiatives

Federal climate-related regulatory development and policy proposals continued to be among our most active files in 2018. The Pan Canadian Framework on Clean Growth and Climate Change (PCF), first announced in December 2016, has faced significant headwinds in 2018 with several provinces opting out and others actively resisting the Federal Government's intention to apply a price on carbon. The significance of this resistance cannot be understated; when the federal Carbon Pricing Backstop (the Backstop) was initially proposed, its equivalency provisions meant that no cement facilities would be implicated. Instead, these facilities would continue to operate under existing provincial pricing systems. Now, with the change of government in Ontario and the cancellation of that province's cap and trade system, as well as the anticipated change of government in Alberta in 2019, most CAC members will have at least one facility subject to the Federal backstop in 2019.

The Backstop has two components: 1) A direct tax on fuels (based on their respective carbon intensity) and 2) An Output Based Pricing System (OBPS) for industry. The OBPS, modeled after Alberta's carbon pricing approach, aims to protect the competitiveness of Emissions Intensive Trade Exposed (EITE) sectors, including cement, by exempting them from the tax on fuels in place of a production weighted carbon intensity benchmark – i.e. cement facilities will pay the carbon price only on GHGs emissions above an industry specific benchmark. The carbon tax begins in January 2019 for OBPS facilities and will apply to fuels beginning April 2019. In both cases the starting rate will be \$20 per tonne of CO₂, rising \$10 per year to reach \$50 per tonne in 2022.

The CAC has been actively engaged throughout 2018 with ECCC officials as well as the Minister's office to advocate for a carbon pricing system that is protective of the competitiveness of the cement sector. This has included regular correspondence with relevant officials as well as formal engagement through ECCC's consultation process. We also made a formal deposition to the Senate Committee on Energy, the Environment and Natural Resources Hearing on the [Study on Greenhouse Gas Pollution Pricing Act](#), which was well received and garnered positive coverage in the Globe and Mail. Finally, in a vote of confidence from industry peers, the CAC was also invited to sit as the federal EITE industry representative on ECCC's Assistant Deputy

Minister's Multi-Stakeholder Advisory Committee on climate policy and competitiveness.

While the final details of the Backstop are still pending, the CAC has secured significant wins over the course of its development. Specifically, cement was one of only four sectors to have their carbon intensity benchmarks moved from the originally proposed 70% production weighted national average to 90%. This one change will save cement facilities over \$124 million over the next four years in Ontario alone. We continue to press hard on the need to exempt process emissions and remain hopeful, as ECCC completes the final phase of their competitiveness assessments, that they will support this conclusion. This change would reduce our Ontario members' compliance burden by an additional \$40 million between 2019-2022 and align the federal system more closely with the costs of Ontario's now repealed cap and trade system, as well as with the still functioning cap and trade system in Quebec. We also continue to push for fair treatment of clinker exports. Importantly, these changes and their significant compliance savings will carry forward to Alberta, if and when the federal backstop is applied in that province.

The other major federal climate file that received significant attention in 2018 is the federal Clean Fuel Standard (CFS). The CFS proposes to establish lifecycle-based carbon intensity standards for liquid, gaseous and solid fuels used in the transportation, buildings and industrial sectors. It is, in effect, an additional price on carbon with both significant opportunities as well as significant risks for the cement sector. While we had been encouraged by ECCC's interest in leveraging the design of the CFS to support fuel substitution in our sector (through a yet to be designed fuel switching credit system) we remained deeply concerned about the continued resistance to recognize competitiveness risks that the CFS creates for EITE sectors, which are already under pressure from other federal and provincial carbon pricing systems. In April, we wrote a strongly worded letter to the Minister expressing these concerns and were relieved shortly thereafter when ECCC adjusted the CFS timelines and approach, in part to more adequately consult on competitiveness issues. The regulatory development will now follow a phased approach, starting with publication of draft regulations for liquid fuels in Spring 2019, coming into force in 2022. This will be followed by draft regulations for gaseous and solid fuels in fall 2020, and final regulations in 2021 with

requirements coming into force by 2023. ECCC has also committed to establish a special EITE working group to properly assess the competitiveness implications of the CFS and the cement sector has been invited as a member. The CFS remains an important file for our sector and now we have some breathing room to continue to seek an approach that offers opportunities to continue cement and concrete leadership in reducing GHGs while securing our competitiveness and guarding against carbon leakage.

Three-Screen Lifecycle Based Approach to Infrastructure

In last year's annual report, we reported that our "three-screen" proposal to require all federal infrastructure dollars to undergo a lifecycle costing assessment, lifecycle GHG assessment and "best available solution" assessment was showing signs of taking root in the minds of key senior officials in Environment and Climate Change Canada (ECCC), Infrastructure, and Treasury Board. 2018 saw concrete progress on this proposal.

First, the Minister of Infrastructure announced in the spring that all federally funded infrastructure projects over \$10 million would be required to apply a "[climate lens](#)" and identify how those investments aim to reduce lifecycle emissions and integrate climate resilience. While the "climate lens" falls short of establishing the kind of outcomes-based procurement policy we have been advocating for, it is a critical step in moving toward more robust procurement practices that integrate lifecycle tools.

Secondly, and more significantly in the long-term, the National Research Council (NRC) has announced that it intends to establish a centralised national lifecycle data inventory and to develop best practice guidelines and performance benchmarks for using lifecycle assessment. In effect, NRC is amassing the data and developing the tools that governments and private sector actors will need to implement a three-screen approach. We believe this work is being undertaken as a direct result of our tireless advocacy on this issue. Our approach to advancing major policy issues is to "build a parade" of diverse stakeholders with overlapping interests, all of whom work within their own capacities and spheres of influence to reinforce ideas and to ensure that policy makers and politicians hear a consistent, coordinated, constant and compelling message. The CAC has played a central role in helping to build a parade on the importance of integrating LCA into public procurement to ensure that the \$800 billion of anticipated infrastructure investments over the next decade return the best value to taxpayers and help Canada meet its climate objectives. In fact, at the inaugural meeting of

the NRC working group established to kick off their "Low-Carbon Infrastructure through LCA Initiative", the CAC was the only industry player invited to present to the group, presenting alongside Canada's most notable LCA experts, including Athena and CIRAIG. It is a true testament how the CAC has become known as a credible, authoritative and constructive voice.

Environmental Claims of the Wood Industry

After two years of hard and careful work, we were very pleased to finalize our ground-breaking research project with the International Institute for Sustainable Development (IISD) examining greenhouse gas emissions from the built environment. The IISD report, supported by an esteemed advisory body of academics, ENGOs and building professionals, is titled "*Global Warming Potential of the Built Environment: Lifecycle greenhouse gas balance of construction materials*". It makes the strongest case yet that current thinking about the role of materials in climate change, particularly the belief that wood is an inherently more climate friendly material than concrete or steel, is misguided and that new more robust, more material neutral approaches to low carbon buildings and infrastructure are needed.

The impact of the report – both in terms of influencing government policies that are highly skewed toward wood, as well as in terms of putting concrete on even footing with wood in the minds of climate sensitive architects and developers – hinges on a well planned and well executed communications, engagement and government relations plan. This work is already well underway, and we intend to formally launch the report early 2019, accompanied by pre-planned communication products and support tools for our members and Allies. Already the report has garnered significant support among key stakeholders involved in its creation. We believe it will be impactful in shaping government policy as well as the broader conversation among building professionals about the strengths of concrete in helping to achieve low carbon and climate resilience goals.

In a related effort, the CAC made a [formal deposition to the federal House of Commons Standing Committee on Natural Resources in March](#), which was contemplating an NDP-led private member's bill to require Public Service and Procurement Canada to adopt what would have amounted to a "wood first" procurement policy. In a strongly worded speech, the CAC argued that Bill C-354 was based on deeply flawed assumptions, artificially propped up one industry at the expense of another, and that it would fail to deliver on its stated economic and environmental objectives. Ultimately, the CAC won the day and the bill was significantly redrafted to focus

on using LCA approaches rather than a presumptive preference for wood. The presentation built on a [similar presentation made by the CAC in February to the House of Commons Standing Committee on Environment and Sustainable Development](#).

Concrete Sustainability Council (CSC) Certification System

Building on the efforts we initiated in 2017, the CAC worked closely with Allies and the Cornerstone Standards Council to advance the implementation of the CSC certification system in Canada. The goal is to establish for concrete the same third-party sustainability validation enjoyed by other sectors, including wood through its Forest Stewardship Council (FSC) certification system. In 2018, we successfully built a business plan, including a pathway toward recognition under LEED, laid the groundwork for Cornerstone to play the role of CSC Regional System Operator (RSO), and began engaging with concrete Allies on how to integrate and amplify the benefits of existing industry certification systems (e.g. Concrete Ontario's Eco Certification) within the CSC model.

The CAC continues to believe that this is an important initiative for our industry and that its implementation will position cement and concrete to yield market benefits from an emerging Canadian "clean economy" mindset. However, shifts in global cement and concrete governance, including the dissolution of the World Business Council on Sustainable Development Cement Sustainability Initiative (WBCSD CSI) – which partially funded the CSC globally – and the emergence of the newly formed Global Cement and Concrete Association, have led the CAC Board to pause its investment in bringing CSC to Canada until there is more certainty on where the

CSC will fit in the new global environment. The CAC will continue to monitor the situation closely and is well positioned to move quickly to re-initiate CSC development in Canada at the appropriate time.

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 carbon pricing, circular economy, sustainable infrastructure, etc. 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, such as the Pembina Institute, Clean Energy Canada, Sustainable Prosperity, Équiterre, Environmental Defence, the Wildlands League, and the Ivey Foundation. This is a formula that works and, if 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 help stabilize our engagement with governments, regardless of their political stripe, while continuing to secure our sector's social license.



2018 Cement and Concrete Industry Strategic Working Session

The cement and concrete industry is at an important juncture in advancing concrete's position as the sustainable building material of choice in the transition to a clean economy, given the rapidly evolving political landscape both at home and abroad.

On October 24, 2018, the Cement Association of Canada hosted a one-day strategic working session, attended by over 60 cement and concrete industry leaders from across the country. Designed to engage participants in a discussion on key developments affecting market growth and the evolving policy landscape, the jam-packed program also aimed to foster a better understanding of the opportunities and issues before us.

We most sincerely thank all who participated and hope that the discussions at this session will provide useful background for the work and strategic planning in each of our respective organizations and collectively through the Concrete Council of Canada.

We would like to hold this type of meeting every two years, so we can review together our industry's response to an evolving operating environment. With a federal election slated for next fall and several provincial elections, we are aiming to hold the next Cement and Concrete Industry Strategic Working Session in the first half of 2020.

Marketing Communications

Our marketing communications activities this past year have continued the long-term work of establishing concrete as the building material of choice for low-carbon, climate-resilient buildings and infrastructure. In our outreach and communications products, we have consistently reminded our stakeholders of the cement and concrete industry's role as a proactive partner in addressing climate change challenges and concrete's essential contribution to building truly sustainable communities.

Expanding Our Digital Content – CONCRETE | Build for life

Building on the launch of our new tagline last year, we introduced in June 2018 a new **CONCRETE | Build for life** microsite that conveys the essence of concrete's value proposition in a highly visual, "easy-to-digest" way. The microsite, which integrates with the Rediscover Concrete portal and cement.ca, focuses on key themes such as building for a low carbon future, for resilience and for lasting value, and shaping tomorrow's buildings. It also presents key supporting facts on the industry's commitment to being a proactive partner in addressing the challenges of climate change and lowering our carbon footprint.



Most exciting are the three compelling new videos featuring [Manitoba Hydro Place](#) on energy efficiency, the [Maison du Développement Durable](#) on sustainability and [Dr. Blair Feltmate](#), Head of the Intact Centre on Climate Adaptation, University of Waterloo, who speaks on resilience and climate change adaptation.

We continue to promote the microsite and videos via earned social media and we appreciate the active support of Members and Allies who like and retweet our posts.

Helping Amplify a Consistent Industry Message

Communicating a consistent, cohesive message that reflects an industry-wide point of view on concrete's contribution to a low carbon, climate resilient future is key to amplifying our collective impact. It influences how our audiences view what we say, helps us meaningfully influence the debate about climate change and the need to plan for infrastructure resilience and helps eliminate unnecessary barriers to sales of concrete.

Distributed to CAC Members and Allies in June, the [Cement and Concrete Communications Resources Guide](#) was developed to help us all stay up-to-date on key industry-wide messages and communications products. It brought together in an easy-to-use format an exhaustive array of resources on key topics that cut across most components of the cement and concrete industry, from industry-level perspectives on concrete's contribution to the clean economy to lifecycle assessment research brief descriptions and full reports. Each item comes with a brief description and a hyperlink to the actual piece for convenient reference. The Guide's next update will be timed to coincide with and support the release of the IISD study.

In October, we presented our marketing communications plan and draft versions of key communications products for the IISD study to Members and Concrete Allies, as part of the 2018 Cement and Concrete Industry Strategic Working Session and the CCC fall meeting. Our purpose was both to obtain feedback on the plan and to build towards industry readiness prior to the release – and we very much appreciate the positive response and helpful feedback we received. All communications products are currently in production and the release of the study is slated for early 2019, when federal and provincial legislatures resume sitting following the Christmas break.

Building Equity with Stakeholders

MUNICIPAL DECISION MAKERS

Continuing to educate municipal leaders on the value of integrating a three-screen lifecycle approach into the design and procurement process for infrastructure has remained a priority. Again this year, our partnership with organizations such as the Federation of Canadian Municipalities (FCM) and the Association of Municipalities of Ontario (AMO) provided us with high profile plenary platforms to deliver the essence of this message to nearly 4,000 elected officials.

At the FCM Annual Conference we also held an industry exchange session which focused on best practices solutions for municipal roads – it drew over 80 attendees. And in December, our partnership with FCM allowed us to promote Dr. Blair Feltmate's video on climate change adaptation to FCM's membership, via FCMConnect, the organization's e-newsletter.



At the AMO conference, we had the opportunity to provide a more in-depth perspective of our three-screen approach message to the AMO Board of Directors. This followed an OpEd on the same topic which appeared in AMO e-News. In addition to this substantive content, our networking event for AMO conference delegates drew a record number of guests, further building goodwill with well over 250 decision makers.

In Quebec, our support of the *Association des ingénieurs municipaux du Québec* (AIMQ) conference and of the Journées du béton, in partnership with Association Béton Québec (ABQ) and Tubécon saw us deliver our message to over 1,300 municipal engineers in the province.



ARCHITECTURAL COMMUNITY



Ontario
Association
of Architects

On the architectural front, and under the banner of the Concrete Council of Canada (CCC), the cement and concrete industry brought its message to the more than 1,000 delegates attending the Ontario Association of Architects conference. CCC Chair and Canada Masonry Design Center Executive Director David Stubbs delivered brief preliminary remarks, while a lunch-and-learn session focusing on the resilience imperative and featuring Dr. Blair Feltmate drew over 70 attendees.

ENGOS

Our national sponsorship program also continued to play a part in building equity with ENGOS and NGOs. In 2018, we have supported influential organizations such as the Pembina Institute, Earth Rangers, Lake Ontario Waterkeeper, Ottawa Riverkeeper, Fraser Riverkeeper, Équiterre and Pollution Probe. This investment in relationships fosters goodwill and, equally important, understanding and active support for our positions on issues of common interest.



PAVEMENT PROFESSIONALS

On the pavement front, the CAC collaborated with CRMCA Allies on a Sustainable Concrete Pavement Seminar series, tailored to meet the information needs of a technical audience. The program built on the work done in recent years to promote alternative concrete/asphalt bidding as well as the LCA, LCCA and the broader benefits of concrete pavements. Seminars have been held in Burnaby, Red Deer, Edmonton, Saskatoon and Halifax, and the Montreal session is slated for early 2019.

Similarly, we were pleased to partner with Concrete Saskatchewan, Concrete Alberta and Concrete Manitoba on a sponsorship and a well-attended networking event for the Transportation Association of Canada conference, which took place in Saskatoon this year.



Transportation Association of Canada

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 has been debated from a fire safety perspective over the last year at the NBCC. CAC has critically reviewed and successfully amended a number of the changes associated with this proposal. We have 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.

EARTHQUAKE DESIGN

CAC is preparing to aggressively resist height increases for seismic and gravity load Tall Wood systems. The wood industry is well funded and heavily supported by the National Research Council (NRC) whose officials 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.

The CAC continues to actively participate at all meetings of the Standing Committee and in the development of the NBCC seismic code provisions. 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. Staff have thoroughly reviewed the proposed changes to introduce three new proposed seismic force resisting systems, namely cross-laminated timber (CLT), moderately ductile steel truss moment resisting frames and moderately ductile steel plate shear walls, and questioned, where appropriate, the sufficiency

and validity of the technical material provided by the proponents to substantiate the proposed changes. As with every NBCC code cycle, CAC officials have kept abreast of the changes to the seismic design values and have evaluated impacts on the design of concrete structures. It is expected that seismic design forces, for building designs in general, will increase in the 2020 edition of the NBCC. The CAC has also secured a seat on the Joint Task Group on Lateral Loads and advocates for equal treatment of all materials in the lateral load design of housing and small buildings.

FARM BUILDINGS

CAC chaired the NBCC Task Group on the Structural Design of Farm Buildings for the 2020 NBCC. Loading specifications were 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 cements in this exposure class.

NBCC PUBLIC REVIEW

Proposed changes for the 2020 NBCC have been made available for public review this fall through the NRCC website. CAC has alerted its Members and all allied industries of this development. As was the case in 2017, CAC will again 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 in 2018. 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 properly recognize the energy saving characteristics of thermal mass in their logic routines.

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; 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 shepherd through the current editions of both the CSA cement and concrete material Standards in 2018 have effectively removed any technical barriers to the use of PLC. This is a real plus for the industry.
- **Carbon Sequestration in Concrete and Recycled Aggregate:** A new Annex on Carbon Additions has been approved as an amendment to the existing CSA A23.1-14 Concrete standard. 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. Again, this annex is being proposed as an amendment to the existing A23.1 Standard to expedite its use in the market place.
- **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 has been approved for the CSA A23.1-19 Concrete Standard and will shortly be approved in the 2019 CSA S6 Bridge Design Code. This will represent the first time the Canadian cement and concrete industry has codified this ultra strong and ultra durable concrete material. 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 is now in public review. 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.

American Concrete Institute (ACI) Activities

In order to continue to be influential, it is important to participate and network in various organizations. One of these is the American Concrete Institute (ACI). The CAC participates in three ACI Committees.

- **ACI 216 Fire Resistance:** CAC sits on this committee to ensure that ACI has the benefit of Canadian fire research and Code provisions during its deliberations.

- **ACI 355 Anchorage to Concrete:** CAC Chairs the CSA A23.3 Anchorage Subcommittee and as such also participated on this ACI committee as the Canadian requirements in this area follow closely the American provisions. New installation specifications for screw anchors recently adopted by ACI will be reviewed for inclusion in the 2024 CSA A23.3 Standard.
- **ACI 318-Sub H on Seismic Design:** CAC continues to participate in this American seismic design committee to stay abreast of developments south of the border with may influence Canadian seismic design practices.

Research and Development

NRCC is now looking to extend its \$40M Climate Change Adaptation Program beyond its original five-year mandate to an additional five years. CAC has consulted with its member companies, allied industries and the Canadian research community and developed a list of four key research areas for consideration for public funding under the Climate Change Adaptation Program. Proposals on these initiatives are being developed and the CAC is planning to submit them to NRCC before the end of 2018.

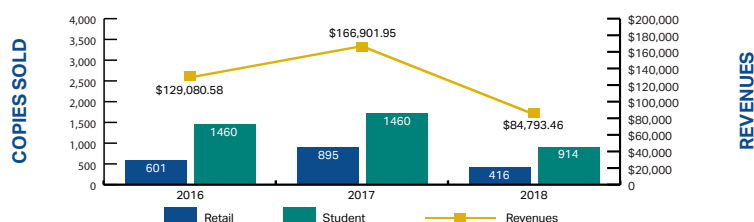
Publications

DESIGN AND CONTROL OF CONCRETE MIXTURES - PUBLICATION CODE: EB101

With the imminent release of the 2018 edition of the CSA A3000 compendium and the upcoming release of the 2019 edition of the CSA A23.1/A23.2 standard (cement and concrete), the CAC will be updating the EB101 publication to reflect changes to these standards starting 2019. In addition, the current EB101 document does not contain the latest information on PLC which is critical to the conversion of the Canadian cement market.

CAC CONCRETE DESIGN HANDBOOK

As shown in the figure below, over 6000 copies of the Concrete Design Handbook 4th Edition have been sold since its release in August 2016 for a total revenue to the CAC of \$380,000. Revenues from CAC publications sales are used to fund the development of key cement and concrete material and design CSA standards. The next edition of the Handbook is scheduled for 2020/2021.



Markets and Technical Affairs

Economics Program/Market Intelligence

In 2018, the Market Intelligence function continued to release regular reports and to seek ways to better meet members' needs for information about cement markets.

We built on last year's efforts to improve data collection by working on the validation and revision of the forecast model in 2018. In order to gain external perspective on CAC's approach to forecasting cement consumption, two consultants were engaged to examine the model and provide recommendations on how to move forward. StatLog and AppEco determined that though the current model worked well to forecast cement consumption, it suffered from a high degree of complexity and lack of transparency. The consultants recommended a new quantitative model that offers similar forecasting performance combined with simplicity and transparency. The updated model will be in place for the final forecast report of 2018.

This edition of the forecast will also mark a change in scope. The Board asked that the forecast model take into account all cement consumption in Canada, including imports and cement produced by non-CAC members. In consultation with members, the new forecast model has been combined with the capacity to forecast these previously excluded cement volumes to provide a projection of the total Canadian market.

In addition to the monthly consumption reports (Canadian Monitor) and quarterly forecasts, the market intelligence group has supported a number of other engagements. We worked with members to support the EnergyStar initiative run out of Duke University. Though data collection was incomplete for the first year of data, the group at Duke is working on 2016 and 2017 analysis for release early in 2019.

Concrete Infrastructure Promotion

In 2018, our focus for concrete infrastructure promotion continued to be the development of new opportunities and new markets. The exterior industrial concrete pavement market is a huge opportunity for our industry, both with roller compacted concrete and full-depth concrete using optimized designs. In collaboration with CRMCA Allies, the CAC offered a series of eight technical seminars on concrete pavement across Canada and an additional session is planned for early 2019.

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, both in Canada and the U.S., 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. In this vein, the CAC continues to work with various organizations through the participation in and sponsoring of conferences and other events and the design and implementation of partnerships resulting in the promotion of concrete infrastructure. Key initiatives conducted in 2018 include our work with the following organizations: the Transportation Association of Canada, the American Concrete Pavement Association, the Transportation Research Board, SWIFT, the Canadian Airfield Pavement Technical Group, Ontario Road Builders Association - Structures Committee, the Ontario Good Roads Association - Municipal Concrete Liaison Committee, Concrete Ontario Technical Committee, MIT Concrete Sustainability Hub, FHWA Sustainable Pavements Technical Working Group and ACI International (including regional chapters across Canada).

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

- **Iowa State University, Concrete Pavement Technology Center.**

This is a national hub for concrete pavement-related research and technology transfer. The Center's mission is to be a catalyst for building more sustainable concrete pavements through partnerships with industry, public agencies and academia. The Center meets the needs of the concrete pavement community for resources to design, build, and maintain sustainable concrete pavements. They research issues important to the concrete paving community and provide cutting-edge information and technology in useful, accessible ways that encourage implementation. Since its inception in 2005, the CP Tech Center has trained more than 10,000 people across North America and provided research results and publications to countless users. CAC utilizes the Center for access to subject matter experts and to support the development of resources for the concrete pavement industry.

- **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.

A photograph of a modern building with a glass and metal facade. The building features large glass windows and vertical metal panels with wavy, organic shapes. The sky and clouds are reflected in the glass. In the foreground, there is a construction site with a blue fence, orange traffic cones, and a street lamp. The text "Regional Highlights" is overlaid on the bottom left of the image.

Regional Highlights



Western Region

It was another very active year for the CAC in BC, Alberta and the Prairies in 2018. The governing BC NDP and Green Party coalition reached its one-year milestone on May 9, 2018. Conversely, the Alberta NDP is nearing the end of its current mandate, with an election coming in the spring of 2019.

We continue to see the anti-carbon tax sentiment strengthen further in Alberta, Saskatchewan and Manitoba. While CAC aims to work effectively with the government of the day, we must continue to be nimble and adapt to the changes around us. We believe this has been demonstrated in our efforts with the BC NDP, and we plan to do the same in Alberta should there be a change in government.

Industry Affairs

BRITISH COLUMBIA

BC Cement Industry Lobby Days were held in Victoria over May 8 – 10, as the CAC and representatives from Lafarge and Lehigh met with key government representatives, including the Ministers of Transportation and Infrastructure, Finance, and Environment and Climate Change Strategy. Our discussions focused on the use of low carbon fuels, lower carbon intensity Portland Limestone Cement, carbon capture technology, waste management policies, the three-screen approach to procurement, and imports related to the BC carbon tax. The CAC also hosted an evening mixer event for the NDP and Green parties, and an opposition Liberal breakfast.



The Honourable Melanie Mark, Minister of Advanced Education, Skills and Training, with Lehigh Hanson's Kent Stuehmer, Lafarge Canada's Jonathan Moser and the CAC's Shane Mulligan, Ken Carrusca and Adam Auer at the BC Cement Mixer.

In the summer of 2018, the Ministry of Environment released a series of discussion papers for the development of the Clean Growth Incentive Program. As part of the subsequent consultation

process, the cement industry held discussions with Ministry staff and provided input on preferences for how the Clean Growth Program should be developed with respect to specifics like funding eligibility, geographic price comparisons, and how the program can go further to address carbon leakage concerns at the \$30/tonne carbon price.

In the Fall, the CAC held a hospitality event during the Union of BC Municipalities (UBCM) Convention in Whistler, BC. The event was attended by government and opposition MLAs, staff and local government officials, and provided an opportunity to meet with many individuals with whom the association and industry has met in the past. Notable attendees included Carole James, the Minister of Finance, George Heyman, the Minister of Environment as well as other members of the NDP government and Liberal opposition. Industry representatives from Lafarge, Lehigh and the local concrete supplier (Cardinal) were also in attendance.

The CAC also presented at a public hearing as part of the provincial budget development process. The hearing provided an opportunity to share our messages on cement and concrete with elected officials of all three political parties. This year the key issues were: protecting EITE industry; lower carbon fuels; Portland-limestone Cement; and life-cycle costing.

PRAIRIES

On January 1, 2018, the Government of Alberta implemented the *Carbon Competitiveness Incentive Regulation* (CCIR). The CCIR transitioned Alberta's regulated facilities from the previous Specified Gas Emitters Regulation (SGER) to an Output-Based Allocation (OBA) system. The development of the OBA system in Alberta had included several industry consultations and workshop sessions in previous years, which the cement industry helped facilitate. The resulting benchmark for the cement sector (785.3 kg CO₂ per tonne of cement) includes 100% free allocation of process emissions, and a 1% tightening rate that applies only to combustion emissions starting in 2020. This policy demonstrates the government's recognition of the cement industry's competitiveness issue and will allow cement manufacturers in Alberta to continue to operate well below these metrics for many years to come.

In November 2018, the CAC, with Concrete Alberta and representatives from Lafarge and Lehigh, held the annual advocacy days in Edmonton. With the Alberta election slated for May 2019, this year's meetings focused on the current Opposition UCP caucus



Concrete Alberta's Dan Hanson and Lehigh Hanson's Kent Stuehmer during the Alberta Lobby Days.

members and key government ministries, including Infrastructure and Environment and Parks. As this year's advocacy days overlapped with the Rural Municipalities of Alberta Fall Convention, the CAC and Concrete AB partnered as joint sponsors of the event, and hosted a sanctioned hospitality mixer for both delegates and elected officials.

In July 2018, the CAC and Concrete AB met with Deputy Minister of Transportation Barry Day, alongside his Assistant Deputy Ministers. Topics of discussion included opportunities for concrete paving in the province, Portland Limestone Cement, alternate bids, and procurement practices. New procurement guidelines are expected to be released by the Province in 2019.

In Saskatchewan, the CAC supported Concrete Sask in executing its first-ever lobby day event in the province. These meetings featured three teams of cement and concrete industry representatives meeting with key ministers, MLAs, and opposition parties to promote concrete as a local, durable product for transportation and infrastructure applications.



Inland Concrete's Steve Schimpf, Lehigh Hanson's Matt Walker, Deputy Premier Gord Wyant, and Yorkton Concrete's Nicole Campbell during Concrete SASK's first lobby day.

In Manitoba, the CAC and Concrete Manitoba representatives met with several cabinet Ministers, MLAs, and some senior civil servants to discuss our three-screen approach and Portland Limestone Cement. These meetings were successful and there is great interest in the concepts we were advocating.

Markets and Technical Affairs

BRITISH COLUMBIA

The cement industry sponsored and attended the annual Fraser Riverkeeper dinner in Vancouver in April. Our industry is dependent on water, and in BC in particular, both cement plants are located

on and use the Fraser River for transportation of raw and finished materials. This event provided an opportunity to speak with attendees from local government and non-profit groups in a positive setting.

The push for Western Canadian markets to transition to Portland Limestone Cement (PLC) continues to be a major focus area for the industry. Discussions with the Ministry of Transportation and Infrastructure have continued over the Summer and Fall, including direct communication with Minister Claire Trevena. Discussions with provincial staff have included a workshop on June 12, 2018, as well as additional meetings during the UBCM Convention in Whistler and at the Government's offices in Victoria on October 12, 2018. Despite some resistance in the bureaucracy, our efforts on a multi-pronged approach with engineers, managers and elected officials have led to positive results.

With Metro Vancouver continuing to pursue its own course on waste management in the lower mainland, the CAC asked Mark Jaccard, a well-known economist and academic from Simon Fraser University, to assess the technological, environmental, and economic aspects of two alternative uses for Metro Vancouver's municipal solid waste: increasing the capacity of the Burnaby incinerator versus the use of Refuse Derived Fuel (RDF) to replace fossil fuel in cement kilns. The results of the [study](#) reveal a much larger decrease in GHG emissions in the cement kiln scenario. Transitioning to RDF was shown to decrease GHG emissions by 24%.

Late in 2018, Metro Vancouver's Chief Administrative Officer and her senior utility managers visited the region's cement kilns. We are optimistic that the industry will have further opportunities to collaborate with Metro Vancouver and carry out pilot work on alternative fuels, including dried biosolids and RDF.

The CAC was a platinum sponsor and supporter of the Pacific NorthWest Economic Region (PNWER) Annual Summit, held in Spokane, Washington from July 22-26. Over 600 regional business leaders, legislators, and key decision makers participated, as delegates explored shared challenges in the region, discussed best practices, promoted regional relationships, and developed an action plan for addressing these challenges in the coming year.

With its sponsorship of PNWER, the CAC was able to host and speak to over 100 delegates and political representatives at a reception for Ministers, MLAs and key legislative staff of the BC and AB Legislatures.

Our seminar on Concrete Pavements was held in Burnaby on October 17, 2018. The audience included representatives from the

BC Ministry of Transportation, who were interested in various topics including concrete pavement design, the benefits of competition in a two-pavement market, and concrete overlays as a rehabilitation alternative.

PRAIRIES

As part of the CAC's continued focus on concrete pavements across Canada, a series of concrete paving workshops were held in 2018. Working in collaboration with provincial ready-mix concrete Allies, the CAC presented to engineers and project managers in Winnipeg, MB, Saskatoon, SK, and Red Deer, AB. Attendance at these events ranged from 35 to 120 people, and each agenda was catered to local needs and opportunities as we continue to raise the profile of concrete pavements in municipal and provincial applications. Additionally, a seminar on Concrete Pavements for Industrial and Trucking Facilities was hosted in Edmonton by the CAC, Concrete Alberta, and ACI Alberta Chapter on November 15, 2018. This was attended by land owners, developers, consultants, contractors and the concrete industry. The seminar featured speakers discussing opportunities with respect to the design and construction of concrete pavements for industrial and trucking facilities, distribution centers, and industrial sites.

As a result of these workshops, Alberta Transportation has included new language in their Requests for Proposals (RFP) for

consulting engineers to consider concrete pavements. Essentially, all roundabouts in Alberta must now consider both asphalt and concrete alternatives, and concrete overlays are highlighted as a recommended practice for slow-moving traffic intersections.

BUILDING FOR TOMORROW CONCRETE PAVEMENT SEMINARS

November 14 — Red Deer

November 15 — Edmonton



November 15
Industrial Concrete
Pavement Seminar in
Edmonton.



Ontario Region

Industry Affairs

ONTARIO LOBBY DAY

The CAC hosted its annual Ontario Lobby Day on Wednesday, November 28th. This was the first one with the new Progressive Conservative government led by Doug Ford. In the months leading up to the lobby day, the CAC met with new Ministers, MPPs, and staff to give them foundational briefings on cement and concrete. With many new MPPs and first-time Ministers, it was important to educate them on our issues related to the Ontario government prior to the lobby day to ensure productive discussions.



Ontario Reddimix's Chris McColl with CRH Canada's Peter Moylan, Marie Glen, John Pontarollo and Robert Bourbeau.



St Marys' Filiberto Ruiz, Lindsey Park, MPP for Durham, St Mary's Bill Asselstine, the Hon. Bill Walker, Minister of Government and Consumer Services, and Lafarge Canada's Bruno Roux.

We had a successful day of meetings with over 25 Cabinet Ministers, MPPs, senior Ministry officials and the Premier's office. The day was attended by cement CEOs, senior representatives from our member companies and concrete allies. Our messaging with this new government focuses primarily around economic issues and with a

government that is committed to ensuring that Ontario is "open for business" we tailored our messaging to fit this narrative. We focused on our ability to deliver solutions that stimulate the economy, create jobs and protect taxpayer investment. Through innovation we are able to enhance competitiveness and attract investment to Ontario.



The CAC's Michael McSweeney delivers brief remarks at the Ontario Cement Mixer.

The day finished with the annual Cement Mixer in the Legislative Dining room with over 200 attendees. MPPs, staff, officials and the Premier attended the mixer with cement and concrete Allies.

GOVERNMENT RELATIONS ACTIVITIES

There are 73 new MPPs out of the 124 MPPs in the Ontario legislature, providing a unique opportunity to influence and shape policy with a new set of legislators.

With the change in government last June, the CAC took immediate action to engage with the new government as quickly as possible, sending letters of congratulations and setting up meetings with new Ministers and MPPs. Over the course of the summer and early Fall, the CAC was able to meet with Ministers, Ministerial staff or officials from all of our targeted ministries to educate them on our issues and reinforce key priorities.

We developed a Government Relations strategy early that identified key industry priorities including:

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

Further, we outlined our key objectives including:

1. Ensuring funds for an Emissions Reduction Fund are available to our industry;
2. Educating the government on low carbon fuels and the need to develop a comprehensive waste strategy to reduce emissions;
3. Educating the new government on Portland Limestone Cement (Contempra) with the goal of mandating its use on publicly funded infrastructure;
4. Educating the government on export/import issues facing our industry;
5. Identifying those regulations that are considered onerous for our industry;
6. Advocating for the exemption of fee increases for aggregate used in cement manufacturing;
7. Advocating for the use of the 'three screen' lifecycle approach on all publicly funded infrastructure; and
8. Educate on the resiliency features of concrete infrastructure.

Climate Change

The new government took swift action after the election to introduce legislation to repeal the *Cap and Trade Act* and fight the federal carbon tax. Early in the new government's mandate, the CAC took the opportunity to meet with the new Minister of the Environment Rod Phillips to discuss the future of climate policy in the province, our potential contribution, and to express our willingness to partner with the new government moving forward.

At the same time, it was also important to inform the Ministry of our competitiveness concerns and costs to our industry with the cancellation of the cap and trade program. We have been actively advocating for compensation for allowances bought under the program as well as ensuring the continuation of funding for GHG emission reduction projects. We continue to advocate for innovation funding for our industry under the new Emissions Reduction Fund.

When Bill 4, the *Cap and Trade Cancellation Act*, went to committee the CAC [presented before the legislative committee](#) and presented low-to-no cost solutions to address climate change in the province. We provided our input into the new climate plan focusing on our potential contributions through the use of Portland Limestone Cement (Contempra), low-carbon fuels/waste policy, and the use of lifecycle analysis. Our messaging shifted to emphasize that there are different ways to reduce GHGs other than carbon pricing, which could act as vehicles for spurring innovation, attracting investment and jobs to Ontario, and providing a competitive advantage to the manufacturing sector across the province, helping to buffer headwinds and uncertainty in our US export markets.

Prior to the launch of Ontario's new Climate Change Plan, the CAC participated in an invite-only roundtable with Ministerial staff and Ministry officials to discuss the details of the plan. With the launch of the new plan, the CAC will be actively participating with the government to provide feedback and constructive input to ensure our industry's interests are represented.

Red Tape and Regulatory Burden Reform

The initiative gaining the most momentum with this new government, and providing CAC with the biggest opportunity, is the government's initiative around red tape and regulatory burden reform. [The CAC made a submission to the government](#), directing it at the Premier and copying the various relevant Ministries (Transportation, Infrastructure, Finance, Natural Resources and Forestry, Environment, Conservation and Parks). As a direct result of our outreach, the Deputy Minister leading this initiative reached out to the CAC and a meeting was held to discuss our submission in mid-October. The CAC outlined over ten potential initiatives for consideration that if accepted would result in greater ease of business, enhanced competitiveness for our industry, and ultimately better value for the taxpayer.

Low Carbon Fuels

The CAC has stressed with both the Minister and the new Deputy Minister at Environment, Conservation and Parks, that the greatest opportunity for reducing emissions is through the use of low carbon fuels. With the new initiative on regulatory reform there is a greater willingness to open this discussion along with new discussions around waste policy.

Portland Limestone Cement (PLC)

We continue to press the government to mandate the use of PLC for all publicly funded infrastructure. Despite resistance from officials in the Ministry of Transportation, we have received positive indications of support from the new politicians and their staff. Most recently we finally received a commitment to remove the restrictions to the use of PLC in sulphate exposed environments. We are working with the Ministry to ensure these changes are made in the specification.

Aggregate Resources Act

We continue to press the new government to exempt fee increases from any aggregate used in cement manufacturing and we are working closely with the new staff in the office of the Minister of Natural Resources and Forestry to educate them on this issue.

Lifecycle Analysis

With the new government, we continue to advocate for the "three screen", lifecycle approach for all public infrastructure dollars to

drive the best value for the taxpayer. We continue to champion this approach to align infrastructure investments with economic and climate objectives.

Markets & Technical Affairs

Our main focus in 2018 was to remove all barriers for the use of Portland Limestone Cement (Contempra) in Ontario. A significant amount of effort was spent both technically and politically, and we are pleased that all barriers to the use of Portland Limestone Cement on municipal infrastructure projects in Ontario have now been removed.

Throughout the year, the CAC continued to build and maintain relationships with municipalities, consultants, owners and developers to actively promote cement and concrete solutions as an alternative to asphalt pavement and specifically promote the benefits of concrete pavements for industrial and trucking facilities. The CAC also remains active in several technical committees of associations such as ACI Ontario Chapter, Concrete Ontario, ORBA Structures Committee, Ontario Pallet Recycling Program and the Ontario Masonry Training Centre.



Quebec and Atlantic Region

Industry Affairs

The CAC continued to be active in engaging with the Quebec Government on a number of initiatives in 2018. This year's critical files for the cement industry included the proposed elimination of thermal coal by 2030, the continuation of the cap-and-trade program and the development and revision of several regulations under the renewed *Environment Quality Act*.

Working with partners is important for the CAC. As a Board member of CPEQ (Québec 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 organized a meeting of the CAC-MDDELCC Joint Committee in June 2018. This committee is critical in advocating to and educating government officials on our industry and how our sector can remain competitive in Québec. In addition, we actively participated in several meetings with senior management from the MDDELCC, the Ministry of Energy and Natural Resources (MÉRN) and Environment and Climate Change Canada (ECCC). These meetings allowed us to remain on top of government initiatives and exchange with key government officials on vital ongoing environmental and energy files.

GOVERNMENT RELATIONS

After 15 years of Liberal regime (with a 18-month hiatus in 2012-2014 for a short-lived PQ minority government), Quebec elected on October 1st its first-ever Coalition Avenir Québec (CAQ) Government, led by Premier François Legault. The CAQ is a center-right party with a progressive conservative program. With 37.4% of the votes, the CAQ elected a majority government. They won 74 seats out of the 125 seats in the National Assembly.

The CAC sent congratulations and introductory letters to the new Premier and to the MNAs for the four ridings with CAC cement plants on the day after the election. Following the announcement of the new Cabinet on October 18, letters have been sent to key Ministers (environment, transportation, natural resources, Treasury Board, infrastructure and finance portfolios) to introduce our industry and identify challenges and potential opportunities. We also requested meetings with Ministers, their staff and senior bureaucrats.

The CAC has already discussed and met with a few Ministers' offices in order to initiate a positive relationship. A comprehensive lobby strategy is currently being developed in collaboration with CAC members and will be refined throughout the coming months. The strategy is being informed by early signals from the Government on priorities and key commitments.

ENERGY POLICY 2030

Québec'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 objective would mean that cement plants would no longer be allowed to burn coal in their kilns by 2030, unless they can capture and sequester 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 working group, which met twice in 2018, is comprised of representatives from the cement industry, lime industry and a few others, in addition to officials from various government ministries. The CAC and its four members operating in Quebec are part of this working group. While government officials acknowledge the significance of this policy for the cement industry, they seem to believe that solutions for switching to alternative fuels or to deploy carbon capture, storage and utilization technologies at the plant level are readily available and cost-effective, which is not the case. This will remain a top priority for the CAC in Quebec in the coming year and one of the first files to be brought to the new government's attention.

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

Regulations setting the details of the cap-and-trade regime from 2021 to 2023 have been promulgated on November 29, 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. Even if the industry has not been formally consulted yet on this topic, early development this past year raised some potential issues for the cement industry. The main concern relates to the development of what the Government calls "carbon ratio index", i.e. an analysis of carbon pricing schemes in other jurisdictions in order to re-evaluate the risk of carbon leakage and its impact on industry competitiveness. This information will be used to determine the free allocations regime. The

CAC is following this carefully through its participation in CPEQ's Air and Climate Change Committee, and will include this topic on the list of issues to discuss with the new Minister of Environment as well as with the new Minister of Finance in 2019.

MODERNIZATION OF THE ENVIRONMENT QUALITY ACT

In March 2017, the Government of Québec adopted a legislation amending its *Environment Quality Act*.

Implementation of the Act is done through a large number of regulations. To that end, twenty-four (24) draft regulations were pre-published in the *Gazette officielle du Québec* on February 14, 2018. Some of these regulations are very similar to the ones they are meant to replace, with only minor amendments, but some of them are new regulations or revised versions of existing regulations with major changes.

The CAC and members analyzed all of these regulations, and [two letters](#) were sent to the Government on April 13, 2018 providing formal comments on those regulations with potential impact on our industry. The comments targeted the regulation addressing the new rules and processes regarding all environmental authorizations, as well as the regulation dealing with the operation of pits and quarries.

The Government had originally informed stakeholders that all of these regulations had to be promulgated no later than December 1, 2018. Several industry sectors have sent letters to the Government arguing that given the significance of these regulations for industry and the comprehensive comments provided on the draft regulations, there should be a second pre-publication of the regulations, followed by another consultation period, rather than rushing the process and promulgate the regulations before December 1. The CAC has also sent a similar [letter](#), on behalf of Members, as well as another letter to the Minister expressing our discontent with the whole consultation process and how it was handled by government officials. On May 22, 2018, the Minister announced that she had asked two former Deputy Ministers to look at the Government's proposed approach regarding environmental authorization processes and to provide independent advice on the path forward. She declared this was necessary given the large amount of comments received after pre-publication of the regulations. During the summer, the whole process was put on hold and the Minister announced that the proposed regulations would be discussed again through a formal "co-creation" process with stakeholders. This process was not initiated before the general election and no announcement has been made to date on this topic by the new Government. This will be another important file for the CAC in 2019.

MARKETS AND TECHNICAL AFFAIRS



QUEBEC

In 2017, the CAC had 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 Québec. 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. In 2018, the CAC promoted the findings of the study to key government officials as well as to elected officials. As a direct result of this effort, both opposition parties showed a keen interest in the study and the Coalition Avenir Québec's transportation critic publicly referred to our study and said that a CAQ government would look at the cost over the full lifecycle and would allow alternative bids in order to increase concrete pavement in Quebec. Now that the CAQ has formed the new Government, we will make the promotion of concrete pavement at the center of our lobby strategy, both with the Ministry of Transportation and with Treasury Board.



We also continue to support research in the field of LCA and LCCA of infrastructure. In June, we provided financial support, in collaboration with the ACI Foundation, to a post-doctoral research project entitled *"Developing a Guideline for Life Cycle Assessment of Structural Concrete through Meta-Analysis and Harmonization"*. The project is being conducted at Sherbrooke University and at the Massachusetts Institute of Technology (MIT).



The CAC also strengthened its partnership with Équiterre in 2018 and was a major sponsor of Équiterre's fundraiser cocktails in Montreal and Quebec City in the fall. These events were attended by over 700 people, including several provincial Ministers and business leaders. CAC members and Allies such as the Association Béton Québec (ABQ) and Tubécon attended the events.

The CAC also remains a member of several technical committees

of associations such as ACI-Quebec & Eastern Ontario Chapter, ABQ, AQTr, CERIU, CPEQ, and ACRGTQ, as well as on the steering committee of the Centre de recherche sur les infrastructures en béton (CRIB), an academic group comprised of researchers from various universities. The CAC involvement in these committees was somewhat limited in 2018 for lack of capacity but we hope to be more active in the future.

ATLANTIC

The CAC collaborated with the Atlantic Concrete Association (ACA) on a well-attended Sustainable Concrete Pavement seminar that was held in Halifax in December 2018. Tailored to meet the information needs of a technical audience, the program featured concrete pavement experts Tim Smith, former director of Transportation at the CAC and now a consultant with Englobe Consulting, and Mark Snyder, president and manager of Pavement Engineering and Research Consultants. In addition, ACA Executive Director Pam Woodman was an active participant in the Cement and Concrete Industry Strategic Working Session on October 24.



The December 3 Sustainable Concrete Pavements Seminar in Halifax.

The Year in Pictures

