



2023 A Year in Review Contents

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DEAR BOARD MEMBERS AND COLLEAGUES,

This has been a momentous year for the CAC and the entire cement and concrete industry. To borrow a term from Board Chair David Redfern, 2023 has been a year of "alignment"— a notable turning point in the evolution of the sector as our vision for a thriving future in a net-zero economy comes into sharper focus.

It is a focus that has not gone unnoticed by governments, ENGOs and sustainability leaders along the construction value chain. We are doing something unique and interesting as we demonstrate leadership in industrial decarbonization by catalyzing conversations on what a mature, sophisticated, and transparent transition to net-zero looks like.

Never has the opportunity for the cement and concrete industry to shape its own future been more tangible. But finding and maintaining alignment is both hard-won and precarious and requires diligence, strategy, and nimbleness to grow and maintain.

This year the CAC, supported strongly by our members and allies, has demonstrated its ability to navigate uncertainty, adapt to political and socio-economic shifts, and shape the policy and market landscapes. In doing so, we have set up our industry for success and distinguished ourselves from other sectors as a proactive, leading voice in addressing key public challenges, most notably of course, climate change.

Among our most significant achievements in 2023 was the May release of <u>Concrete Zero</u>: <u>Canada's Cement and Concrete Industry Action Plan to Net-Zero</u>. It is hard to overstate the significance of this achievement. It is the result of more than two years of effort from the CAC team, as well as many of our allies in the concrete industry across Canada. It gained attention in governments, amongst ENGOs, other industrial sectors, and even the media, as a high watermark in how to articulate a credible, transparent, and collaboration-based vision of a net-zero future.

Already, this work is reaping dividends. On the strength of our Action Plan and related Net-Zero Roadmap with the federal government, Canada has decided to take on the role of co-chair of the U.N. Cement and Concrete Breakthrough initiative. This deepens the Government of Canada's commitment and obligation to continue to work with our sector, modelling collaborative public policy solutions to the challenge of achieving net-zero. In 2023, we saw a significant influx of capital supports for decarbonization projects in our sector, the creation of new investment supports strongly shaped by the CAC's advocacy (e.g., Contracts for Difference, Investment Tax Credits for Carbon Capture Utilization and Storage, etc.), the formalization of federal low-carbon procurement standards for concrete products, with funding and support for advancing our carbon accounting and transparency objectives. I believe the Action Plan has also served us well in achieving policy progress beyond the federal arena — including in British Columbia, where we may finally be poised to solve longstanding carbon leakage challenges under that province's carbon pricing regime.

This Action Plan could not have been developed without the engagement and alignment of our members and our allied concrete associations as well as independent concrete producers. Its successful implementation will likewise require a deep commitment to working together as an industry, optimizing our collective resources, and helping each other identify and overcome challenges. On that note, I am pleased to report that the Concrete Council of Canada has been revived. I am personally committed to ensure it remains a useful forum for the whole industry to elevate and support our needs and advocacy in every region and amongst all product types, as we take action to achieve our net-zero ambitions.



^ The Concrete Council of Canada meeting in Toronto in November.

Strengthening and maintaining industry alignment in the service of delivering value to our sector has been a core focus since the release of the Action Plan and will remain so through 2024.

In this regard, I am grateful to the Board of Directors for their continued support and trust. Their direction and advice make the CAC one of the most effective industry associations in the country. This year, the Board of Directors approved a new Strategic Plan for the CAC, which sharpens our alignment with the Net-Zero Action Plan and brings more discipline and focus to CAC priorities and activities. It became increasingly clear throughout this exercise that the internal organization of the CAC also needed to modernize to reflect not only the new Strategic Plan, but the evolving net-zero environment with a corresponding surge in public policy and market shifts impacting manufacturing operations and sustainable construction. To that end, I am also grateful to the Board for their recent approval of a modest restructuring of the CAC into four main functional groups: Industrial Decarbonization; Construction Innovation; Public Affairs & Concrete Zero Advocacy; Corporate Affairs & Market Intelligence as well as the addition of two new policy staff to strengthen our Industrial Decarbonization capacity. I am pleased to announce that this restructuring will be in place for January 1, 2024, with two new staff joining our team by the end of Q1. While these additional resources are necessary to implement our ambitious agenda, my priority remains to ensure that our members' financial contribution to the CAC is fully optimized, and I will continue to always keep front and center our members' priorities, economic pressures and the protection and creation of shareholder value.



CAC's Sarah Petrevan presented the Concrete Zero Action Plan to partners and members at the Train the Trainer Workshop.

Of course, the hard work is ahead of us as we strive to implement the Concrete Zero Action Plan across Canada in the coming months and years. A key vision for the Action Plan is that it provides a new, comprehensive, and transparent platform to enhance our engagement with key external stakeholders. To help this process, we engaged the Academy for Sustainable Innovation (ASI) to help us build an engagement platform that could be adapted to serve our many stakeholder audiences, from internal industry staff to engineers, specifiers, architects, policy makers, etc. As a first step, ASI developed a "Train the Trainer" workshop, delivered in November to CAC staff and sustainability leaders from the industry, providing them with the skills and tools we will all need to amplify the messages within our Action Plan.

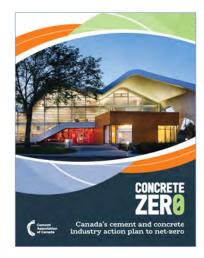
This year, with the advice and support of the CAC Board, we also began the work to develop a carbon accounting taxonomy, with the goal of leading the development of a transparent, robust, and stringent accounting taxonomy that enables the cement and concrete industry to meet the ambitious goals set out in the Concrete Zero Action Plan and challenge competing sectors to meet the same high standard. These efforts will dovetail with our ongoing work with the National Research Council of Canada (NRC), Treasury Board, and others to push for demand-side policies, such as "buy clean" procurement policies to drive the public and private sector toward performance-based specifications for low-carbon concrete products.

As you know, all this work takes place against a backdrop of both political and economic volatility.

Economically, many uncertainties weighed on the Canadian economy in 2023, including worker disruptions, forest fires throughout much of the country, and dramatic increases in the Bank of Canada interest rate. While the industry continued to perform well in 2023, it's unclear whether ongoing capital spending by governments, including to address the deep demand for housing, will be enough to stave off the downside risks in 2024. We will continue to track the market and to hold all governments' feet to the fire in funding infrastructure and appropriate housing initiatives.

Politically, this past year saw continued escalation of tensions between the federal and provincial governments, including significant disagreements around the federal government's climate change policies. 2024-2025 will no doubt continue the political volatility with much at stake, including how Canada responds to external competitiveness threats, such as the U.S. Inflation Reduction Act (IRA). As we have in 2023, we will be keeping a close eye on how governments position Canada in securing low-carbon capital investment. In this context, we have seen an increase in government funding programs available to our members. Many of them have been or are well positioned to be awarded significant project funding, both provincially and federally, for low-carbon investments and we know there are many more applications in development. However, these programs are often complex and require comprehensive effort to prepare applications. Doing everything in our power to support the success of these applications will be a key activity for the CAC in 2024. We will continue to work with our members and allies to help them identify and navigate existing and new public financing opportunities.

2023 witnessed disruptive general elections in both Alberta and PEI, as well as the nominations of new leaders in many provincial parties across Canada. Elections demand increased lobbying efforts from the CAC to build relationships with newly elected officials and their staff. They also provide opportunities to raise the profile of the industry across Canada. The CAC has done this



In May 2023 the CAC, alongside its members and partners, released Concrete Zero, an Action Plan to netzero cement and concrete by 2050. Learn more at Concrete Zero.ca.

[...] we will be keeping a close eye on how governments position Canada in securing low-carbon capital investment."

successfully through 2023. Looking ahead to 2024, we are already preparing for the BC provincial election, and significantly renewed engagement with opposition parties in Ottawa.

I am blessed to be surrounded by a committed and talented team at the CAC, who works tirelessly for our members. I am immensely proud of how the CAC team has adapted to the internal and external changes and have performed at the high level that we are increasingly known for. We sadly said goodbye in July to Geneviève Breton, who decided to pursue new opportunities within the Ontario school management system. Genevieve led a re-brand of our organization during her too-short stay with us. I am very excited, though, with the hiring of Dan Valin as our new Director of Communications and Marketing. Dan joined us in October, bringing with him many years of practical experience in marketing communications with various organizations. I have no doubt he will be up to the task.

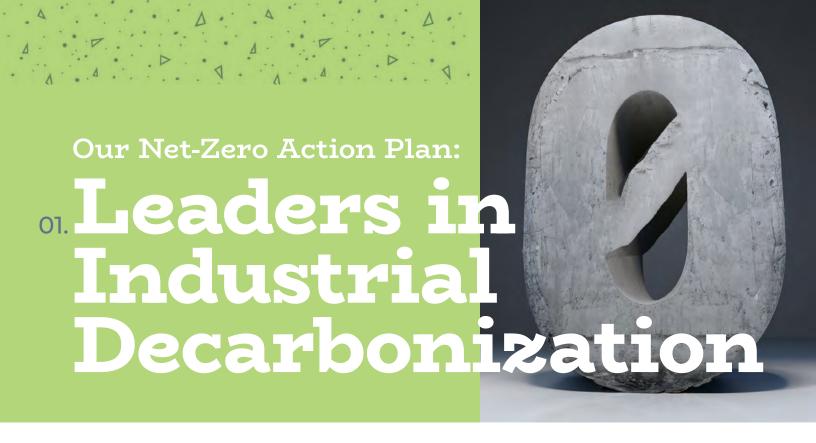
I know that 2024 will bring its share of challenges, some anticipated and others unknown. The only certainty is that I and the CAC team will raise the bar again in 2024. We understand the responsibility and the privilege of serving in a critical industry, at a transformational time in its history.

Thank you for your support and collaboration and best wishes for a Happy, Healthy and Prosperous New Year in 2024!

Adam Auer

President and CEO

Cement Association of Canada



2023 FURTHER SOLIDIFIED THE REPUTATION OF CANADA'S CEMENT INDUSTRY AS

a leader in industrial decarbonization. With the release of <u>Concrete Zero: Canada's cement</u> <u>and concrete industry action plan to net-zero</u> in May 2023, the cement and concrete industry had the positive momentum needed to leverage a number of successes in public policy. These include significantly increased capital supports for cement industry projects (over one billion dollars), and a recognition that our industry is the clear leader in the fight against climate change, and in support of achieving a net-zero future.

Creating Alignment: Developing a Carbon Accounting Taxonomy

In 2023, the CAC initiated the development of a carbon accounting taxonomy with the advice and support of the Board. The goal of the taxonomy is to lead the development of a transparent, robust, and stringent accounting taxonomy that enables the cement and concrete industry to meet the ambitious goals set out in our Concrete Zero Action Plan. The industry's carbon accounting needs can be broken down in four distinct, yet interdependent pillars: 1) measuring our progress and improving data collection and measurement to support the Concrete Zero Action Plan; 2) informing public policy by defining low-carbon



A panel speaking at the Concrete Zero Action Plan reception. Left to right: Trevor Nightinggale (National Research Council Canada), Dale Beugin (Canadian Climate Institute), Sarah Petrevan (CAC), Jody Becker (Ellis Don), David Redfern (Lafarge Canada), and Bart Kanters (Concrete Ontario).

cement and improving EPD comparability; 3) supporting innovative technologies; and 4) market development through monetizing carbon reductions outside the regulated market (e.g., CCUS). We have made progress on our taxonomy and will pursue an aggressive implementation agenda in 2024 and beyond.



Our priorities for 2024 include supporting the opening of the Product Category Rules (PCRs) for cement and concrete to improve comparability by narrowing the scope of variability they allow in LCA methods, and explicitly account for and recognize reductions from emerging technologies (CCUS, blended cements, etc.). It will also include developing and piloting a "responsible cement" directive that would certify Environmental Product Declarations (EPDs) as "commercial-ready" when developed according to specific standards above and beyond what is required in the PCR. Finally, we will champion development of technology-specific offset protocols (e.g., Cement CCUS) fungible in global markets. All these initiatives will require collaboration within the cement industry and amongst allies.

A Meeting with The Hon.
Steven Guilbeault, Minister
of Environment and Climate
Change Canada, at our
federal lobby day. Left
to right: David Redfern
(Lafarge Canada), Steven
Guilbeault, Filiberto Ruiz
(St Marys Cement —
A Votorantim Cimentos
Company), Emma Schindler
(Ash Grove Cement, a CRH
Company), Oliver Patsch
(Heidelberg Materials),
and Adam Auer (CAC).

Procurement and Buy Clean: Progress Towards Performance-Based Standards

With the release of our Concrete Zero Action Plan, we have witnessed continued interest in the role of procurement policies to support the broader decarbonization agenda, including making capital investments more efficient as the market increases for lower-carbon materials.

The CAC has been heavily engaged with the National Research Council (NRC) on the launch of their Platform to Decarbonize the Construction Sector at Scale. This includes an advisory role in developing the Low Carbon Built Environment Challenge Program which we expect to launch early next year. This program will support industry-developed carbon accounting tools for materials, components, assemblies, and whole assets — a key priority for the CAC.

We also continue to play a leadership role on the Buy Clean Alliance — a coalition of industry and ENGO partners — to advance government policy in this area. While we had anticipated the launch of a Buy Clean Strategy this year, the release has been put on hold, pending securing the necessary budget to support the demonstration of lower- and low-carbon building materials in the built environment.

Finally, we have been approached by the federal government to begin discussions on the next iteration of the Standard on Embodied Carbon in Construction, and specifically the Federal Standard on Low-Carbon Concrete. This standard sets minimum requirements for the procurement of design and construction services to reduce and disclose the embodied carbon of major construction projects.

The objective of this standard is to establish requirements to disclose and reduce the embodied carbon footprint of construction projects as per the commitments in the Greening Government Strategy. Right now, the Standard is set at a 10% reduction, and consultations will begin in early 2024 on how to take that further.

Government Collaboration: Achieving the Roadmap to Net-Zero Concrete



Over the past year, we have been hard at work to deliver on our ambitious partnership with the federal government on implementing the Roadmap to Net-Zero Concrete. The partnership commits both parties to the reduction of 15 megatonnes of CO₂ cumulatively by 2030. Achieving this ambitious goal requires timely and thoughtful policy implementation.

The first half of 2023 saw regular meetings across four areas of work: research and development; carbon accounting and procurement; capital projects; and supply chains. Meetings

 Released in November 2022, the Roadmap to Net-Zero Carbon Concrete was spearheaded by a joint government-industry working group, coled by the Cement Association of Canada and Innovation, Science and Economic Development Canada.

frequency decreased throughout the year because of continued staff turnover at Innovation, Science and Economic Development Canada (ISED). However, cement and concrete continue to remain at the top of the government's agenda, as they announced their leadership of a global Cement and Concrete Breakthrough — an international initiative to accelerate decarbonization of the cement industry — at COP28. To support this international leadership, we have proposed and are in active discussion with ISED on their support for CAC's strategic priorities: our carbon accounting taxonomy; education and engagement to support low-carbon procurement and the adoption of performance-based specifications; and our aggressive R&D agenda. Together, these pillars help advance our objective of wide acceptance of lower-carbon cement and concrete and the recognition of concrete as a material of choice in a more circular decarbonized built environment.

We will continue to advocate for a reasonable government budget to support the implementation of the measures contained in the Roadmap. Our industry's continued commitment and support of this initiative further enshrines us as a leader on climate change and a model for what an industrial strategy looks like in Canada.

Building the Policy Landscape to Lead: Investment Tax Credits and Contracts for Difference

A significant focus for the CAC over the past year has been on key government policies and programs that will contribute to investment in decarbonization technologies and processes for the cement industry.

The design of the much-anticipated Carbon Capture Utilization and Storage Investment Tax Credit (CCUS ITC) occurred over much of 2023. On behalf of the industry, the CAC secured several design elements to support the eligibility and use of the CCUS ITC for project at cement plants. These include provisions surrounding dual-use, allowances for international labour/installers, and protection of commercial sensitivity and intellectual property in knowledge-sharing agreements. This tax credit could cover up to 50% of capital expenditures of a CCS project at a cement plant — a significant tool to attract capital investment into CCS technology in Canada. The policy design for the CCUS ITC is now finalized and we anticipate legislation and the tax credit to receive Royal Assent by the end of 2023.

We also saw significant movement on Carbon Contracts for Difference (CCfDs), with the standing up of the Canada Growth Fund, and their approach to working with industry and companies/investors in near- and net-zero projects. Carbon Contracts for Difference are a proposed solution to solve the "production incentive gap" for near net-zero materials such as cement and concrete. While it is technologically feasible to produce these materials today, there is overwhelming capital and operating risk in doing so given that the market isn't yet willing to purchase and use such materials. In a CCUS project, for example, there is no option for a company/investor to recoup the ongoing costs of paying to transport and store the captured carbon. Given that a premium cannot be recouped on the product, it is then the case that carbon offsets are sold to monetize the value of the captured and stored carbon on the market. However, a guarantee on the carbon credit is required to reduce the substantial risk and achieve a positive business case. CCfDs solve this risk by essentially providing insurance on the value of the carbon credit. Other demand-side policies such as procurement are also critical in the scale up of near and net-zero materials on the market.



Sarah Petrevan speaking about output-based pricing systems and carbon contracts for difference at Building Momentum Toward Net Zero, a conference hosted by the Canadian Climate Institute and the Net-Zero Advisory Body. Left to right: Dale Beugin (Canadian Climate Institute), Sarah Petrevan (CAC), Michael Bernstein (Clean Prosperity), and Caroline Brouillette (Climate Action Network Canada).



A University of Ottawa Research presentation at the CAC office in Ottawa. Left to right: Adam Auer (CAC), Prof. Leandro Sanchez (uOttawa), Dr. Sergio Dantas (uOttawa), Claude Xia (uOttawa). The CAC has been instrumental both in the policy design and providing guidance on implementation, including through the leadership of a joint industry/ENGO coalition, which is co-led by the CAC. It is no exaggeration to state that CCfDs would not exist in Canada were it not for the advocacy of the CAC.

Research Agenda: Building on our Action Plan

Over the past year, the CAC has developed a research agenda to bolster our organizational priorities as defined in our Strategic Plan, and the ambitious goals defined in our Concrete Zero Action Plan. This year, we have embarked on two studies: an industry-wide study on the future trajectory of zero-emission heavy duty vehicles (including cost and commercial availability) and the development of an economic model to provide a forecast on the commercial availability and economic viability of decarbonization solutions across Canada, based on the modeling and assumptions that comprise our Concrete Zero Action Plan.

Because of growing interest in the leadership of the cement and concrete industry plan to decarbonize, the CAC has been successful in leveraging close to \$75,000 of funding from external sources to support the transportation study on medium-and-heavy-duty zero-emission vehicles. This additional funding will lead to a more robust, detailed study and comprehensive public policy recommendations to enable the availability and commercialization of zero-emission vehicles across the cement and concrete industry.

This study also leverages the relationships we have established with ISED for the implementation of the Roadmap to Net-Zero Concrete.

Our Economic Modelling Report will provide information on the decarbonization solutions proposed in our Concrete Zero Action Plan. The output report will focus on when solutions are projected to be commercially available, in what time frame, and their likelihood of adoption in different regions of the country based on economic viability and cost to industry. This information will then be used to inform public policy asks, particularly around financial and regulatory support for decarbonization projects.

Strengthening Partnerships with ENGOS

2023 saw continued engagement with environmental non-governmental organizations (ENGOs) who continue to view Canada's cement industry as leaders in industrial decarbonization, and a model that should be emulated across other industries and sectors of the economy. The cement industry is now in the spotlight and is included in many areas of research from the environmental community — everything from a better understanding of viewpoints on how the US Inflation Reduction Act is impacting investment in Canada, to how Buy Clean can be accomplished for building materials.

The CAC is a sought-after contributor to public policy conversations with the ENGOS, and has provided feedback, information, and commentary on several issues of strategic importance to our industry including carbon pricing, competitiveness issues and border adjustment mechanisms, buy clean and other performance-based procurement policy, as well as investment in industrial decarbonization. In addition to numerous invitations to speaking events at conferences and collaborations, the CAC has been acting as a media spokesperson, and chairing public conversations on the aforementioned topics. The CAC has leveraged these strong relationships with ENGOs to receive support on several key issues including the design of BC's Output-Based Pricing System, and Canada's proposed Clean Electricity Regulation.



We look forward to continuing to collaborate with the ENGO community on issues of mutual importance. and to ensure that the leadership of the cement industry in addressing environmental initiatives, including climate change, is recognized, supported, and enabled.

The Cement Association of Canada sponsored the Ottawa Riverkeeper Gala.

Regulatory Affairs

Bill S-5: Strengthening Environmental Protection for a Healthier Canada Act

Bill S-5 received Royal Assent on June 13, 2023. The Bill modernizes the Canadian Environmental Protection Act, 1999 (CEPA) and represents the first set of comprehensive amendments to CEPA since it was enacted over 20 years ago. With this Bill, the Government of Canada recognizes, for the first time in federal law, that every individual in Canada has a right to a healthy environment. The Government must develop, within two years, an implementation framework to set out how that right will be considered in administering the Act. The Government announced in October that it will release a framing document in the first quarter of 2024 and a draft implementation framework by the fourth quarter of 2024. The CAC will analyze the proposed framework and will provide comments as appropriate.

Other Issues

We continued in 2023 to monitor other national and international policy and regulatory initiatives that could have an impact on cement manufacturing activities. This included the risk assessment and risk management activities of the federal government for specific substances under the Chemicals Management Plan (CMP), as well as air quality policy development and implementation. Cement manufacturing facilities continue to report their releases to the environment through the National Pollutant Release Inventory (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.



AS THE VOICE OF THE CEMENT AND CONCRETE INDUSTRY

on Parliament Hill, the CAC must always be aware of the most recent political trends and developments, and in this regard, 2023 was an active year. While the *Supply and Confidence Agreement* between the NDP and the Liberals has kept the Liberal minority government in power without fear of an election, significant strains appeared in 2023, reminding us that support from the NDP could vanish at a moment's notice, triggering an election in 2024.

After eight years in power, Prime Minister Trudeau and the Liberal party find themselves in a precarious position, their popularity now at an all-time low. Getting a pharmacare deal on the books with the NDP will give the Prime Minister the relative quiet of the Christmas break to consider his options with trusted advisors. He has bounced back before, but with the rumor mill flying and others in the party workshopping their credentials, the Prime Minister will need a strong will to fight if he is to stay on as leader at a time when the polls are against him.

That means that advocacy with the Opposition parties is a high priority for the CAC. For a sector that has placed such a high priority on industrial decarbonization, Pierre Poilievre's Conservatives pose a unique challenge; while campaigning hard on "axe the carbon tax", they have so far remained silent on climate policy for industry, saying specifically we will have to wait for their election platform. Known for a "technology not taxes" disposition, we must be mindful that the fate of several federal climate policies

[...] advocacy with the Opposition parties is a high priority for the CAC."

important to our industry could be in doubt if the Conservatives were to win a majority government. Engaging with Conservatives on how industrial decarbonization policy is crucial to our ability to attract capital into Canada will be a key priority of our 2024 lobbying efforts.



Adam Auer and Michael Chong, Conservative Shadow Minister for Foreign Affairs of Canada, at GreenPAC's Breakfast on the Hill.

Climate policy has come to national prominence at the end of this year, but not as expected. Carve-outs from the Liberal government's carbon tax, their signature climate policy, continue to be bandied about following the surprise exemption of home heating oil from the policy in late October. Conservative and NDP motions to extend the exemption to all home heating and to remove the GST from all forms of home heating both failed to pass in the House of Commons. At the most recent meeting of the Council of the Federation, Premiers were united in their criticism of the discrepancy of current carbon pricing measures. While the Prime Minister has stated that there will be no additional exemptions, the pressure is expected to continue, especially in jurisdictions that will be considered must-wins for the Liberal party in the next general election.

This past year was also a volatile year in provincial politics, with Danielle Smith pulling off a majority victory in Alberta that no one else in the rest of the country seemed to expect. Fortune did not favour former Manitoba Premier Heather Stefanson who was increasingly unpopular with Manitobans, and NDP leader Wab Kinew was elected as Manitoba's first Indigenous Premier. Looking ahead, we will see provincial elections next year in British Columbia and New Brunswick. In Ontario, the provincial Liberals picked Bonnie Crombie as their new leader. In Quebec, the shine seems to be dulling on Premier Legault whose recent decisions have antagonized English-speaking citizens in the vote-rich greater Montreal area. After losing an important by-election in October, he will be looking to shore up his credentials and will continue to be under pressure from the Quebec population for stronger environmental programs. More on the provincial politics in the coming pages.



Alberta

After the closest election in Alberta history, the United Conservative Party of Alberta (UCP) and their leader Danielle Smith were re-elected with a majority government. At the call of the election, it was widely believed that it was Rachel Notley and the NDP's election to lose, which has since raised doubts about the future of the NDP Leader.

Following an extended summer recess, the Legislature reconvened at the end of October, marked by a Speech from the Throne outlining the government's focus for the upcoming session. Emphasizing the province's ongoing struggles with the federal government, the speech took a



^ A CAC-branded belt buckle at the Calgary Stampede.

firm position on Alberta's rights, notably around the development of oil and gas resources. It underscored its intent to employ the Alberta Sovereignty within a United Canada Act if these rights are not respected. Themes of affordability, sovereignty, and investments in infrastructure, education, health care and housing were found throughout the speech. While there were references to 'green energy' and working towards a net-zero grid by 2050, there was no mention of emissions reductions by industry, aside from oil and gas.

British Columbia

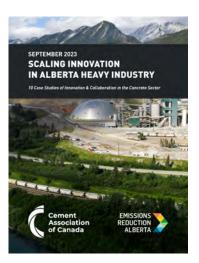
With less than a year until a general election in British Columbia, the NDP and Premier David Eby are experiencing high popularity in the polls and are on track to win another majority government in October 2024. The BC United Party (formerly the BC Liberals) has seen a decrease in popularity that is being further fractured by the emergence of the BC Conservative Party. BC United is currently standing at 20% support, virtually neck-and-neck with the two-person BC Conservative Party caucus at 21%. As issues of housing and affordability continue to dominate, the BC NDP government has demonstrated a commitment to continuing aggressive action on climate change.

Government Relations

Alberta

During the summer and the fall, CAC representatives took the opportunity to introduce themselves to a number of Ministers and the Premier, both at the Calgary Stampede and at other industry/government events. We hosted a 2023 Calgary Stampede reception with Concrete Alberta where we reunited with and met new elected officials including many key Ministers. We will continue to engage on an ongoing basis and are currently planning to host our first lobby day with the Danielle Smith government in Spring 2024.

We strengthened our relationship with Emissions Reduction Alberta (ERA) and co-authored a technical paper with them highlighting concrete and cement investments they have made via the Technology Innovation and Emissions Reduction (TIER) program. It is encouraging to note that ERA is investing in companies across all key levers for decarbonization that are part of our Concrete Zero Action Plan.



The Cement Association of Canada partnered with Emissions Reduction Alberta to release 10 case studies on innovation and collaboration in the concrete sector.



^ Adam Auer, Minister of Environment and Protected Areas of Alberta Rebecca Schulz, and Glen Furtado at the CAC – and Concrete Alberta-sponsored Calgary Stampede reception organized by New West Public Affairs.



Meeting with BC Premier David Eby at BC Lobby Day.
Left to right: Tyler Thorson (Heidelberg Materials), Left to right: Ken Carrusca (CAC), Adam Auer (CAC), Tyler Thorson (Heidelberg Materials), BC Premier David Eby, Martha Murray (CAC), Kent Stuehmer (Heidelberg Materials), Matt Dalkie (Lafarge Canada)



Ken Carrusca (CAC), Bowinn Ma (Minister of Emergency Management and Climate Readiness of BC), Adam Auer (CAC), Jason Saunderson (Concrete BC)

British Columbia

We held our first BC Lobby Day in April 2023 with the NDP government and had the opportunity to meet with Premier David Eby and several of his Ministers, focusing our messages around reaching net-zero by 2050 (and the launch of Concrete Zero) and the industry's position on the output-based pricing system. We held a reception with government members in the evening and a breakfast the following morning with members of the BC United party. We also had several opportunities to engage further with the Premier, including at an industry announcement in May, a political event in June, and most recently a meeting in September to discuss our concerns about the initial Output-Based Pricing System (OBPS) proposal and its expected negative impact on competitiveness and carbon leakage.



^ An industry funding announcement at the Lafarge Richmond cement plant. Left to right: Jason Salfi (Dimensional Energy), Brett Henkel (Svante), Brad Kohl (Lafarge Canada), George Heyman (Minister of Environment and Climate Change Strategy of BC), BC Premier David Eby, Aman Singh (BC MLA), Kelly Greene (BC MLA), Henry Yao (BC MLA)



The BC government's proposed OBPS has been a top priority for the CAC in British Columbia. Following the release of a proposal that would have significant competitiveness impacts for the industry, we increased the level of advocacy. Conversations with government staff continued, leading to meetings with the BC Minister of Environment and Climate Change Strategy and the Premier as well as the BC Minister of Finance. Government officials have come back with a revised proposal, and while it is an improvement for the industry (e.g. the OBPS tightening rate is now proposed at 1% only on combustion emissions), there are still concerns with the initial benchmark and the 90% stringency (compared to 95% at the federal level). We will continue to work with government bureaucrats while also advocating politically to help ensure that the final OBPS parameters best protect industry competitiveness.

CAC worked closely with our allies at Concrete BC to comment on the City of Langford's low-carbon concrete policy. Langford's ambition to incorporate lower-carbon building materials within their policies was not optimized or reflective of best practices to reduce emissions. After sharing information with and making presentations to Council, the City of Langford re-considered their policy and revised the wording to reflect industry recommendations.

The Union of BC Municipalities (UBCM) had its annual conference in Vancouver in September. The CAC was in attendance and had the opportunity to connect with both municipal and provincial A CAC met with Premier David Eby to discuss the Output-Based Pricing System (OBPS). Left to right: Ken Carrusca (CAC), Staphanie Voysey (Lafarge Canada), Oliver Patsch (Heidelberg Materials), BC Premier David Eby, Jasper van de Wetering (Heidelberg Materials), Adam Auer (CAC), George Heyman (Minister of Environment and Climate Change Strategy of BC)



Adam Auer presenting on the Concrete Zero Action Plan at Concrete BC's Annual General Meeting. politicians from across the province. The CAC, along with Concrete BC, shared a booth on the exhibition floor where many connections were made and conversations took place. UBCM and Metro Vancouver's annual Zero Waste Conference also offered opportunities for conversations with city managers and other municipal senior staff that help support our industry's efforts on concrete zero, alternative fuels and raw materials, procurement and continued collaboration with the industry.





 Jason Saunderson, Executive Director of Concrete
 BC, at the Union of BC
 Municipalities Conference.

^ Concrete Zero-branded merchandise at the Union of BC Municipalities Conference.

Manitoba & Saskatchewan

The CAC delivered a virtual session on lower-carbon concrete procurement to the Ministry of SaskBuilds and Procurement and is aiming to increase frequency of meetings with government officials in both Saskatchewan and Manitoba. We continue to support our allies in Concrete Sask and Concrete Manitoba with the great work they do for their members and we have participated in a number of their events and AGMs.



Meeting with MP Warren Steinley at Federal Lobby Day. Left to right: Ahmed Soliman (Concrete Manitoba), Francis Brazeau (Tomlinson Ready-Mix), Rob Wenger (W.F. Botkin Construction), Nicole Campbell (Yorkton Concrete), Matt Walker (Heidelberg Materials), Warren Steinley (MP), Glen Furtado (CAC)



Cowboy hard hats at Concrete Saskatchewan's Annual General Meeting.



CAC's Glen Furtado presenting on Concrete Zero at Concrete Manitoba's Annual General Meeting.

Education and Training

Part of CAC's role is to help raise awareness within the procurement, architectural, contractor, and engineering (PACE) communities. Sharing information with these key stakeholder groups raises awareness of the decarbonization ambition of our industry and provides the decision-makers within these groups the comfort and opportunity to understand how to incorporate lower-carbon infrastructure for their clients and communities.

The CAC delivered a dozen in-person presentations to various western audiences within the PACE community in 2023 and ten virtual presentations that explained Concrete Zero and discussed the use of PLC-based lower-carbon cement and concrete within municipal infrastructure.

In addition, we continued to strengthen our relationship with academic institutions, providing guest lectures at both the British Columbia Institute of Technology (BCIT) and at the Southern Alberta Institute of Technology (SAIT). Both these technical institutions have active concrete materials course components within their Civil and Buildings curriculum and it is a good fit for CAC to introduce lower-carbon cement and concrete to future design audiences.



THIS YEAR PROVED TO BE THE BIGGEST CHALLENGE FOR

Premier Ford's second-term government. Plagued by controversy around the removal of lands from the Greenbelt and the announcement of an RCMP investigation, much of the fall session was spent in damage control. With the loss of two senior Cabinet Ministers, a subsequent Cabinet shuffle, and a drop in the polls, the Government focused on managing issues rather than driving forward key priorities, including the Housing Supply Action Plan and its commitment to build 1.5 million homes by 2031.

The Cabinet Shuffle included new Ministers in several of our target Ministries (Environment, Transportation, Municipal Affairs and Housing, Labour). A shuffle of Ministers also triggers a shuffle of staff, and a significant part of the fall was spent doing outreach to new Ministers and their staff, as well as bringing them up-to-speed on issues around cement and concrete.

Despite the many changes and issues currently facing the Ford government, they continue to have a significant lead over the other parties. The NDP led by new leader Marit Stiles was plagued by internal division and the Liberals were focused on a leadership convention with new leader Bonnie Crombie being announced on December 2.

Government Relations Activities

Over the past year we have continued to engage both in-person and virtually on a regular basis to advance key initiatives of the

CAC and our member companies. The current government continues to be supportive of construction and our industry, recognizing our importance to achieving their housing goals and building a strong and resilient economy.



Martha Muray (CAC), Minister of Natural Resources and Forestry of Ontario Graydon Smith, and Glen Furtado (CAC) at the Association of Municipalities of Ontario President's Reception sponsored by CAC.

With a focus on *Building Ontario*, the government's attention remains on infrastructure investment and enabling the conditions to support the building of new homes, bridges, roads and transportation infrastructure, including skills development.

Our pre-budget submissions this year have touched on seven competitiveness themes:

- 1) Investing in infrastructure;
- 2) Recycling the revenues from the Emissions Performance System into low-carbon technologies;
- 3) Addressing competition from other Canadian jurisdictions and the *U.S. Inflation Reduction Act* with financial and regulatory incentives:
- **4)** Attracting and training the needed labour force, particularly skilled workers;

- 5) Establishing demand for low-carbon materials through the use of procurement, performance-based incentives, and a predictable carbon value;
- 6) Updating building codes and standards to reflect new priorities such as greater energy efficiency and lower-carbon building materials: and
- 7) Ensuring that land use compatibility issues are considered when looking at re-zoning of lands for the building of more homes.

Similar to last year, our focus in advocacy revolved around enhancing competitiveness by leveraging opportunities within the clean economy and implementing a strategy for industrial decarbonization. The implementation of an industrial decarbonization strategy holds the potential to position Ontario as a frontrunner in drawing investments that bolster the province's economic well-being in an increasingly decarbonizing global market.

Some of the bigger issues we have been driving over the past year include:

- Revenue Recycling from the Emissions Performance **Standard Program:** This year the government announced that all proceeds would be returned to industry on a one-to-one basis. Those who are required to pay will have the opportunity to see that money returned for future carbon reduction initiatives. We will be speaking with the new Minister and her office about the design of this program to ensure that EITE industries are fairly represented in the future design and development of the program, with incentives provided to our industry for initiatives designed to reduce emissions.
- **Recycled Aggregates:** The CAC has been participating in a stakeholder working group looking at opportunities to increase the use of recycled aggregates. This continues to be a priority issue and we have been engaging with both the Ministry and the Minister's office on an ongoing basis to move this issue forward.
- Land Use Compatibility/Definition of Employment Lands: The government over the past year has introduced a number of regulations and legislation designed to increase the availability of land and quicken the speed of housing development. While supportive of the government's goal of housing, we, along with other industry associations, have been stressing the need to ensure that employment lands are protected and our ability to operate and supply the needed housing materials in the municipalities where we are located is maintained.

[...] our focus in advocacy revolved around enhancing competitiveness by leveraging opportunities within the clean economy and implementing a strategy for industrial decarbonization."



• Carbon Capture, Utilization and Storage: The Ministry of Natural Resources and Forestry began this year to change legislation and regulations to allow for the development of a carbon capture framework in the province. We have made submissions in support of this, highlighting some of the important elements that need to be considered from an industry perspective to ensure success.

On an ongoing basis we engage with members to advocate on site-specific issues, including opportunities for funding from the Ontario government for local investments.

Ontario Lobby Day

The CAC and Concrete Ontario annual lobby day was held on November 27. Throughout the day we had over 15 meetings with Ministers, MPPs, senior political staff and representatives from the Opposition parties. This year we also had the opportunity to spend time with the Premier and a few of his key senior Ministers. Attended by both CAC members and allies, the day was an excellent opportunity to talk about industrial competitiveness and Concrete Zero. Over 100 people attended our reception in the evening in the Ontario Legislative Dining Room.

Ontario Premier Doug Ford and then Minister of Labour, Immigration, Training and Skills Development Monte McNaughton announcing funding for truck driving training for women.



^ CAC staff, partners, and members had a photo opportunity with Ontario Premier Doug Ford.

Concrete Ontario Advocacy

In addition to our advocacy work, we also advanced specific issues for Concrete Ontario with the provincial government. This included Ministry-specific meetings, committee appearances, budget submissions, and joint letters to the provincial government. We put an added focus on the labour shortage this year, particularly as it relates to drivers for our industry. We were involved in a study to identify provincial and federal funding opportunities and submitted a proposal to the Skills Development Fund to enhance the standardization of ready-mixed truck driver training in the industry. We continue to look for opportunities to leverage the collective strength of our two organizations on an ongoing basis.



Meeting with Matthew Rae during the Ontario Lobby Day. Left to right: Steve Morrisey (CAC), Matthew Rae (MP), Resha Watkins (St Marys Cement — A Votorantim Cimentos Company), Alanna Aqui (St Marys Cement — A Votorantim Cimentos Company)



Adam Auer presenting at the Concrete Ontario Annual General Meeting.

• Quebec Region Highlights

THE COALITION AVENIR QUÉBEC (CAQ)'S GOVERNMENT IS

going through its toughest times since it took power in 2018. After losing a seat in a by-election in early October, the government faced strong opposition to its key priority for the fall session — the creation of a new Health Agency to oversee the practical day-to-day operation of the health system. In a rarely seen move, six former Quebec Premiers jointly signed a public letter opposing this initiative. The government is also in the middle of negotiations with workers from the public service, mainly in the health and education systems, and a series of strikes has started in November, affecting the public school system and the health system.

Premier Legault antagonized the anglophone community when his government announced in October that tuition fees for new Canadian students from outside Quebec will nearly double as of fall 2024, increasing from \$8,992 to \$17,000. The CAQ government says this is a way to promote the use of the French language and bolster francophone universities by re-investing the money to their programs. The move was heavily criticized and English universities such as McGill, Concordia and Bishops have said this will have devastating consequences on their institutions. Following this backlash, the government reduced the increased fees to \$12,000 but added a requirement that the students learn French.

Both the party and Premier Legault appear to be weakened after such an eventful Fall and the most recent polling puts the CAQ behind the Parti Québécois (PQ) in voting intentions.

The Minister's public reference to our Action Plan was the result of ongoing discussions between his office and the CAC."

Government Relations

At the onset, it is important to note that the CAQ government, with its focus on economic development, innovation and productivity, is well aligned with our own priorities. The Premier and his Cabinet understand business well and are willing to work with industry. However, Quebec's population continues to put a lot of pressure on the government to be "tough on polluters".

In May, the Quebec government released the 2023-2028 implementation plan of its climate change plan (named Plan for a Green Economy). It calls for an additional \$9 billion in investments over five years, which represents an increase of nearly \$1.4 billion over the previous iteration. The Plan includes many measures, including some to decarbonize the industrial sector. During the press conference, Benoit Charette, Quebec's Minister of Environment and the Fight against Climate Change, mentioned our Concrete Zero Action Plan, and indicated that his government will work with the cement and concrete industry to achieve GHG emission reductions in the sector.

The Minister's public reference to our Action Plan was the result of ongoing discussions between his office and the CAC. We also met his Deputy Minister and other senior bureaucrats to present the Action Plan, which was well received, and government representatives confirmed they have many shared objectives with the industry. There was a commitment from the Deputy Minister to work with the industry to identify areas where the policy and regulatory framework could be adapted to enable and facilitate the implementation of further GHG emission reduction by the cement and concrete sector. Procurement mechanisms and the authorization processes around the use of low-carbon fuels in cement kilns were identified as two key topics where collaboration would help. These will continue to be our priorities in 2024 for the implementation of the Action Plan in Quebec.

Industry Affairs

Working with partners remained a priority for the CAC in 2023. As a Board member of CPEQ (Quebec Environment Business Council), and a proactive player in CPEQ Committees, 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.

In addition to our work on the Concrete Zero Action Plan, the CAC and members have had interactions with government officials on many issues, including potential amendments to the cap-and-trade program, the use of Supplementary Cementitious Materials (SCMs) in Quebec, and the review of the industrial pollution reduction program.

Quebec's cap-and-trade program

While Quebec's regulations around the cap-and-trade system were amended in 2022 following a long consultation process, Quebec and California are evaluating potential adjustments to the operation of the carbon market. The aim is to ensure that it remains an effective tool for achieving the 2030 greenhouse gas emissions reduction target and carbon neutrality in 2050. Five information sessions were held between June and December 2023, covering

topics such as emission caps in a context of carbon neutrality in 2050 and emission rights accumulated in the market; price control mechanisms; offset credits, carbon sequestration and new green energies in a market context. Formal consultations are expected to be held in 2024 and the CAC will work with member companies to make sure that concerns and questions from the cement industry are clearly articulated and can influence the process and its outcomes. Specific potential amendments have not been announced yet but new limitations on the use of carbon offsets could be introduced, which would be a major concern for our industry.

Supplementary Cementitious Materials (SCMs)

In August, representatives from the CAC and the three member companies operating in Quebec, along with representatives from Ciment Québec, met with Quebec Ministry of Transportation (MTQ) officials to discuss the protocol and testing requirements associated with the use of SCMs. Some adjustments to these requirements were implemented in 2021 at the industry's request, but cement and concrete producers believe the Ministry's protocol and requirements could still be streamlined while ensuring the same level of transparency and technical suitability. The CAC is coordinating a working group comprised of representatives from the four cement companies and is working towards a common position to be presented to the Ministry in 2024.

Industrial pollution reduction program

Quebec is currently pursuing a review of its industrial pollution reduction program (Programme de réduction des rejets industriels). Under this program, industrial facilities must obtain an authorization that constitutes their operating permit, with a series of requirements addressing all aspects of their potential environmental impact. The cement industry was consulted on the future of the program and the CAC sent a letter in October, providing a few suggestions to ensure that the program can meet its objectives of continuous improvement while being practical, feasible, predictable and simple. Some of the key recommendations in the letter relate to avoiding duplicative requirements and unnecessary burdensome reporting, as well as protecting the confidentiality of the data and information provided by cement plants. We will continue to discuss this important matter with government officials in 2024.

Administrative burden

For many years, the CAC has kept raising the issue of unreasonable delays and administrative burden as part of the environmental authorization process. We had hoped that the publication of an "omnibus" regulation in 2022 would help since the omnibus regulations are intended to make minor or administrative amendments to several regulations through a single regulatory process. After the release of two omnibus regulations (in 2022 and 2023), it is fair to say that the issue has not been addressed, so it will remain a priority for the CAC in 2024. We will advocate for faster and more predictable authorization processes in the context of the implementation of the Concrete Zero Action Plan.

Markets and Technical Affairs

An important part of our activities aims at promoting the sustainability and durability of concrete infrastructure. This is done through education on life cycle assessment (LCA) and life cycle cost analysis (LCCA), as well as through communicating to government officials the importance of our sector to the economy and to the achievement of Quebec's GHG reduction targets.

We sought to enhance our collaboration with our allies in 2023, making a deliberate effort to speak from a unified voice. In addition to our work with our concrete partners (ABQ and Tubecon) in the development and implementation of the Concrete Zero Action Plan, we were pleased to be a Gold sponsor of the ACI Quebec & Eastern Ontario Gala of Excellence in concrete design and infrastructure held in Laval in March. The event was a success and was attended by a broad range of actors in the construction sector.

Also in March, the INRS Water, Land and Environment Centre, a university research institution, held a workshop entitled: "Vision on the capture, storage and use of CO2 in Quebec". The CAC made a presentation on the cement industry perspectives, highlighting the critical importance of CCUS for the industry roadmap to net-zero concrete by 2050, but also the many technical, logistical and financial challenges to deploy CCUS at the scale of a cement plant.



WITH A YEAR AND A HALF LEFT IN THE CURRENT GOVERNMENT'S TERM, NOVA

Scotia Premier Tim Houston and his Conservatives have a commanding lead in the polls with 46% support, followed by the Liberals and NDP tied at 25% and the Green party at 3% (https://338canada.com/ns/). The next election will be held on or before July 15, 2025.

On January 1, 2023, the Nova Scotia Output-Based Pricing System (OBPS) came into effect, replacing the province's cap and trade system. Regulations were made to provide for registration and voluntary participation under the Nova Scotia OBPS. Registration is mandatory for facilities emitting 50,000 tonnes of CO₂ equivalent (CO₂e) or more annually.

In October, we urged the government to amend the production unit definition in the OBPS regulations to facilitate the use of lower-carbon cementitious materials to limit the negative impacts on EITE industries. We highlighted the importance of this solution not only to reduce CO_2 emissions in cement manufacturing but also to limit adverse competitive impacts from carbon leakage. Along with this change, we stressed our wish to have revenue from the OBPS recycled back to large emitters, particularly in the hard-to-abate industries such as cement.

The CAC attended the Atlantic Concrete Association's AGM to report on the next steps for the industry's Concrete Zero Action Plan. The CAC continues to work with Atlantic Concrete's reactivated Environment Committee and their members on what regional needs and messaging are required for local governments, customers and stakeholders regarding our Action Plan.



Meeting with MP Lena Diab during Federal Lobby Day. Left to right: Pam Woodman (Concrete Atlantic), Joel Westin (Bridgewater Ready Mix), Lena Diab (MP), Bruce Casey (Casey Ltd.), Natalie McCarthy (Association des Entrepreneurs en Maçonnerie du Québec), René Drolet (CAC), Kent Nickerson (South Shore Ready Mix)



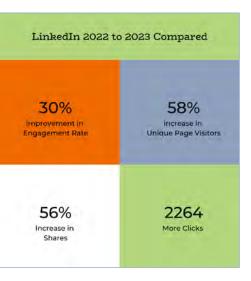
Concrete Zero

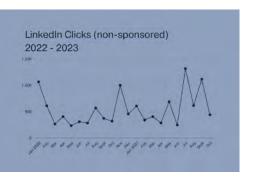
In May, the CAC, together with its members and partners in the cement and concrete sector, released Concrete Zero: Canada's Cement and Concrete Industry Action Plan to Net-Zero. The plan was years in the making, requiring collaboration and working with the government and broader industry. We hosted our members and partners in Ottawa for the launch, as part of our Federal Lobby Day. Our launch reception was a success, with industry, government and ENGOs joining us. MPs Andy Fillmore and Jennifer O'Connell both spoke at the event.

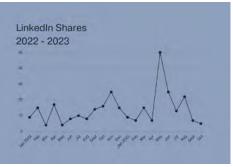
Following the launch, CAC ran a comprehensive digital marketing campaign promoting Concrete Zero. The campaign included ads on LinkedIn, Facebook, Instagram, and Google, garnering over six million impressions for Concrete Zero.

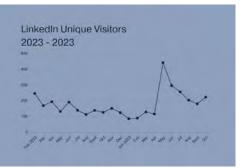


Member of Parliament Andy Fillmore speaking at the Concrete Zero Action Plan Parliamentary Reception alongside Member of Parliament Jennifer O'Connell.









Social Media

We had a productive year sharing our messages of sustainability and Concrete Zero on social media.

On LinkedIn, we continued our pattern of fast growth, gaining over 2,000 followers in the past 12 months. LinkedIn has been the most successful platform for promoting Concrete Zero and similar initiatives, with our clicks increasing 43% over 2022 and sharing of our content increasing 56%. With a post engagement rate of over 6%, a 30% increase over 2022 and well above the 2% average for non-profits, we anticipate continued growth in 2024.

Facebook and Instagram served as effective platforms for our Concrete Zero ad campaign, driving over 900,000 impressions on the platforms combined. Although CAC's presence on Instagram and Facebook is still relatively new, we sported a nearly 7% engagement rate on Facebook (1.7% average for non-profits), and over 9% on Instagram (2.9% average for non-profits).

With the acquisition of X (formerly Twitter) by new ownership, many users have left the platform. Despite much of our original audience no longer using the platform, CAC still has a nearly 6% engagement rate (1.2% average for non-profits). We created an account on Threads, an X competitor, to broaden our audience and increase the number of people our sustainability message reaches.

CAC Monthly

We continued sending out the CAC Monthly this year to keep our partners and members engaged and up-to-date on our work. Our newsletter consistently provides value to our stakeholders, with an email open rate and click rate more than double the industry average. The CAC also worked to keep members and allies updated on the latest political happenings, sending out weekly email updates during the Alberta provincial election and other updates for major political announcements such as federal and provincial economic statements.

Media Coverage

This was a busy year for CAC in the news, with plenty of coverage of our sustainability initiatives and our Concrete Zero Action Plan, which was covered dozens of times in the media including in *The Financial Post*, *ReNew Canada*, and *Daily Commercial News*. Our staff were quoted in countless publications this year from discussing *building codes in The Globe & Mail*, to







^ Coverage of the Concrete Zero Action Plan in ReNew Canada.

clean tech incentives in Reuters, to the Federal Budget in The Financial Post. In total, CAC was interviewed or mentioned over 40 times in the media in 2023.

We were also heard on the airwaves, with Sarah Petrevan speaking on CBC Radio's Metro Morning, René Drolet appearing on Radio Canada, and Adam Auer appearing on multiple podcasts, including *The Construction Record* and *The Construction Revolution Podcast*.

On top of earned media, CAC wrote many op-eds and editorials over the year, including AUER: Canada must put forth clear path to investments in clean technologies now or risk forfeiting the race, Canada must speed up decarbonization to keep up with the U.S., Closing In On Canada's Climate Commitments, and Clean electricity is the heart of Canada's economic growth

Two other articles will be published soon, one for the Canadian Concrete Pumpers and the other one for the Transportation Association of Canada.

Sponsorships

In 2023 we once again invested in several key sponsorship opportunities to further our relationships with key influencers and provide opportunities to generate greater awareness of the CAC and the launch of our Concrete Zero Action Plan.

The CAC was pleased to be a Corporate Partner with the Federation of Canadian Municipalities (FCM) this year and to represent our industry at their annual conference in Toronto in May. We were the presenting sponsor of the Host City Sponsor Reception at the Royal Ontario Museum where CAC Adam Auer delivered remarks to close to 100 attendees.



Prime Minister Justin Trudeau speaking at the Federation of Canadian Municipalities.



Adam Auer speaking at the Federation of Canadian Municipalities VIP reception for FCM Board Members and Big City Mayors.

We also had the opportunity to participate in FCM's Municipal Leaders' Summit and Parliamentary Reception in Ottawa, two touch points that reinforce our relationships with municipal elected officials.

Given the importance of municipal audiences to our procurement agenda in particular, we also sponsored the Association of Municipalities of Ontario (AMO) in London where we hosted the AMO President's reception.

In collaboration with Concrete BC, we took part in the Union of BC Municipalities (UBCM) annual conference trade show in Vancouver in September, showcasing the industry's commitment to achieving net-zero. This year's conference set a new attendance record, drawing in more than 2000 municipal and provincial delegates. Throughout the four-day conference we had the opportunity to connect and re-connect with both municipal and provincial politicians from across the province.



CAC's Martha Murray delivering remarks at the Association of Municipalities of Ontario conference reception.



CAC's Martha Murray with BC Premier David Eby at the Union of BC Municipalities Convention.



Adam Auer with Alberta Premier Danielle Smith at the Calgary Stampede.



^ CAC's Glen Furtado presenting at the Transportation Association of Canada Conference.

Meanwhile, the CAC and Concrete Alberta proudly sponsored the annual Calgary Stampede reception organized by New West Public Affairs. This popular gathering was extremely well attended, attracting numerous provincial politicians. It provided us with the valuable opportunity to interact with key provincial Ministers and Premier Danielle Smith.

The Transportation Association of Canada's annual conference was held in Ottawa in September and the CAC was a Principal sponsor of the event. Our sponsorship offered us logo exposure at their main sessions, a chance to network at the President's reception and a sponsored article where we promoted the CAC/ Emissions Reduction Alberta white paper.

We co-sponsored a session at the Royal Architectural Institute of Canada (RAIC) annual conference with Concrete Alberta in Calgary. Glen Furtado (CAC) and Dan Hanson (Concrete Alberta) developed and delivered a session on lower-carbon concrete that provided an opportunity for attendees to earn professional development credits issued by RAIC. In the Fall, CAC's Adam Auer had the opportunity to present to the RAIC Board of Directors at their event in Whistler and to develop greater collaboration with this important organization. These engagements were among the best we have ever had with the architectural community and they are expected to open deeper opportunities to work with this community on the delivery of our Net-Zero Action Plan.

In Quebec, we sponsored the magazine Voir Vert, taking advantage of advertisement opportunities in their newsletter. The CAC was also pleased to be a Gold sponsor of the ACI Quebec & Eastern Ontario Gala of Excellence in concrete design and infrastructure held in Laval in March.



CAC sponsored email advertisements in Voirvert, a sustainable building magazine in Quebec.

We also continued to value our relationships with our ENGO partners through our ongoing sponsorships at Swim Drink Fish Gala, the Ottawa Riverkeeper Gala, GreenPAC Breakfast on the Hill, and Pembina UnGala.



Pembina unGala. Left to right: Adam Auer (CAC), Bill Asselstine (St Marys Cement — A Votorantim Cimentos Company), John Wilkinson (former Ontario Minister of Environment), Martha Murray (CAC)

Forward to 2024

With the hire of Dan Valin as our new Director of Communications and Marketing, we will be looking to add a fulsome and collaborative long-term communications and marketing strategy. This new strategy will ensure that we collectively pull together in the same direction and establish a refreshed and aligned voice and tone for the CAC. It is imperative that our strategy be aligned with our overall association objectives in order to strengthen the chances of our messaging being retained and actioned.

Every aspect of our communications and marketing portfolio will be evaluated to determine all changes necessary to meet our objectives. Part of our overall new strategy will include a new direction for our social media platforms, bringing together new assets that will be used to share our voice and messaging. Some of these new assets will include graphics and videos that will become highly shareable within our industry and with our members and stakeholders, while some new exciting assets will help us bring our industry together to bring life to our messaging.

Beyond tools and assets, the new strategy will push us to be bolder in our efforts to communicate our incredibly important Concrete Zero Action Plan, and also to promote our industry, our members, and our contributions. We will maximize our partnership and sponsorship opportunities, working collaboratively with partners to bring more value to the CAC and help raise our profile and amplify our messaging.

It is imperative that our strategy be aligned with our overall association objectives in order to strengthen the chances of our messaging being retained and actioned."



[...] 2023 showed impacts of the interest-rate hiking cycle in recent history."

Market Intelligence

CAC's market intelligence continued to trace macro and micro events throughout the year, providing two main forecast and supporting materials for members and allies. Our most recent forecast, based on traditional macroeconomic inputs for the Canadian economy, shows a slight slowing demand for cement in 2024. While we may have already slipped into a "technical recession", demand remains solid as both public and private projects move ahead, and some stalled projects return to construction. Many uncertainties weighed on the Canadian economy in 2023. including worker disruptions and forest fires throughout much of the country, but the industry continued to perform well throughout the year. If inflation starts to stabilize and interest rates fall in the middle of next year, the new policy push for more housing may lead us to a surprisingly high level of demand.

Looking back to the beginning of 2023, it seemed like Canada's economy proved to be resilient coming out of the COVID-19 pandemic. However, in an effort to curb soaring inflation after the pandemic, the Bank of Canada raised its interest rate from 0.25 to 4.25 per cent in 2022. Three more rate hikes in 2023 brought the rate up to the current 5 per cent. While some signs were evident late last year, 2023 showed increasing impacts of the most aggressive interest-rate hiking cycle in recent history.

Housing is the most exposed sector to higher interest rates. After hitting record-highs in 2021, housing investment had dropped 12.1 per cent in 2022, falling in seven provinces. When the Bank of Canada paused rates at 4.5 per cent in early 2023, the market experienced a robust recovery that surprised economists. However, the decline resumed when the Bank hiked rates again in June and July.

In Canada's construction industry, 2022 saw record demand for cement and concrete and 2023 has continued to show demand at almost an equal pace. Accounting for this is in large part due to robust public sector investment in infrastructure at all levels of government. The pandemic proved to be a learning moment for governments as they tried to maintain employment in a sector as large as construction and also saw the political payback in investing in hospitals and schools. We continue to see high levels of intentions in capital spends in provincial budgets and there are large projects at various stages of construction in the larger provinces. For its part, private sector investment in non-residential construction was better than expected in 2023, and although significant headwinds such as labour shortages and high interest rates persist, residential construction still has lots of demand with immigration being at elevated levels.

Affordability, and more to the point housing affordability, is an issue so much in the public consciousness that all politicians at every level are introducing pro-housing policies at a rate not seen in decades. Unfortunately, all three levels of government often appear to be working at cross-purposes. While the success of all of these new housing policies will be net positive, it remains uncertain when and to what extent they will result in changing the curve to increase housing units.

The CAC will continue to track the market and to hold all governments' feet to the fire in funding infrastructure and appropriate housing initiatives. We know demand for cement and concrete is expected to grow in the coming decades. The World Economic Forum, amongst others, predicts that demand for cement could increase by up to 45% by 2050 globally. Our role is to promote effective solutions which are needed urgently if the construction sector as a whole is to decarbonize.

Next year, the CAC will begin a process with members and allies to collect the data we need to track our Action Plan success and help us establish strategies for targeting markets with the best opportunities for growth but also to identify to governments and other decision makers how they can help us achieve measurable results. We will be working through our revamped committee system to help develop a strong data strategy that remains in compliance with the Competition Act.

Transportation and Public Works

Education and Training

Part of the CAC's role is to help educate public and private owners, engineering / architect consultants, and contractors on the many benefits of cement and concrete products used in roadway applications and on the recently released Concrete Zero Action Plan. To assist in this process, CAC technical staff participated in a large portfolio of in-person seminars and online webinars in 2023. Among the highlights are:

- PLC Advancement Working Group PLC Advancement Working Group is co-chaired by CAC & Concrete Ontario with the goal of supporting the expanded use of low-carbon PLC in the Canadian marketplace. The Working Group members include the two Associations, cement suppliers, admixture suppliers and ready-mix concrete producers.
- Scott McKay Concrete Technology Course Presentations CAC staff took part in the 2023 Scott McKay Concrete Technology course doing presentations on Concrete Pavements and Concrete Innovations which included discussions on Concrete Zero and PLC.



- ^ CAC's Tim Smith presenting at the Ontario Concrete Pavement Seminar.
- Ontario Concrete Pavement Seminar The 2-day Ontario Concrete Pavement Seminar which was organized by Concrete Ontario and the CAC covered a review of the basics of concrete pavement design, construction and maintenance and hands-on training on the use of various concrete pavement thickness design software.
- GTAA Presentation on Sustainable Low-Carbon Concrete and Ontario EPDs Concrete Ontario and CAC staff gave a presentation to the Greater Toronto Airport Authority (GTAA) on Sustainable Low-Carbon Concrete and Ontario EPDs. This presentation was undertaken in response to GTAA tendering a concrete pavement project that required a reduction of the cement CO₂ footprint by at least 30 % based on an estimated 0.93 kg of released CO_2 for each 1.0 kg Type GU cement used in the mix.
- Lunch & Learn Presentation on Engineered Soils for Municipalities of Chatham-Kent CAC staff gave a session on Engineered Soils to engineering and maintenance staff from the Chatham-Kent area and local consulting firms and contractors. The session covered cement-modified soils, cement-stabilized subgrade, cement-treated bases and full-depth reclamation of deteriorated asphalt pavements.
- Good Roads Presentation on Low-Carbon Concrete for Ontario Infrastructure CAC staff gave a presentation on Low-Carbon Concrete for Ontario Infrastructure, which included reviewing concrete carbon lifecycle, cement manufacturing process and CO2

savings potential, action to Net-Zero future, and how architects and engineers can reduce the carbon footprint of concrete and carbon calculation for roadways.

- **Highway 3 Next Generation Pavement Presentation** The CAC gave a presentation at the TAC Technical Committee combined Pavement and Soils & Materials meeting on the next generation concrete pavement placed on Highway 3 in Ontario. The presentation reviewed the project details, the new MTO concrete performance requirements, smoothness results for the highway construction, and MTO noise study results for longitudinal grooved pavement.
- **SWIFT Conference Low-Carbon Concrete Pavement Presentation** — CAC staff gave a presentation on Innovations in Sustainability for Concrete Pavements — Low-Carbon Concrete for Airport Infrastructure at the 2023 SWIFT airport conference. The presentation reviewed the cement and concrete industry Action Plan to Net-Zero, industries / designers / owners' role in reducing carbon intensity of concrete, EPDs, and an example of low-carbon concrete calculation for a concrete apron.
- Additional Presentations on Concrete Pathway to Carbon **Neutrality and Low-Carbon Concrete** — In addition to the specific webinars mentioned above, the CAC gave virtual and in-person presentations on Concrete Pathway to Carbon Neutrality and Low-Carbon Concrete topics at several association conferences, webinars, and meetings. The presentations were developed to explain the work our industry has been doing on the roadmap to Net-Zero and discuss the use of PLC-based cements and low-carbon concrete.
- **Concrete Pavement Collateral Development** CAC staff helped in the development of four transportation related documents for Concrete Canada.

Technical Committee Involvement

The CAC assures the secretariat function for the CAC Ontario Technical Committee. The key function of this group is to discuss Ontario's cement and concrete industry technical issues and liaison with MTO and Ontario municipalities on specification, certification, and testing issues. Other areas of discussion are marketing and promotional topics, liaison with OGRA Concrete Liaison Committee, liaison with Concrete Ontario and the research needs for the industry. Key accomplishments of the Committee in 2023 were as follows:



CAC worked with partner concrete associations to release a number of concrete pavement fact sheets, including one on intersections.

- 1) PLC Technical Summary Document 2023 Update CAC staff undertook an update of the 2021 PLC Technical Summary document to include a number of recently released research on PLC and update the utilization map with new government agencies and municipalities who have accepted the use of PLC. The document also includes an updated project list to show the many applications in which PLC-based cements have been used across Canada, and a new Appendix on the City of Winnipeg test section comparing a GUL concrete section of roadway versus a GU concrete section.
- 2) Development of Document on Understanding Your Mill **Test Report** — CAC Ontario Technical Committee produced a document, at the request of the Concrete Ontario Board of Directors, to help address questions on the information contained in cement companies Mill Test Reports. This document should help address any questions on the CSA requirements for GUL cements.
- 3) MTO OPSS Specification Reviews The CAC provided comments to MTO on several OPSS.PROV specifications, including:
 - a. OPSS.PROV 1301 Materials Specification for Cementing Materials
 - b. OPSS.PROV 1350 Materials Specification for Concrete and OPSS.PROV 904 Construction Specifications for Concrete Structures — Materials and Production
 - c. OPSS.PROV 1002 Materials Specification for Aggregates -Concrete Special Provisions No. 110S17 (Amendment to OPSS 1002, April 2018)
 - d. MTO LS Test Methods

Acting as representative for the cement and concrete industry, we promote the many benefits of concrete pavements, cement-based roadway solutions and use of PLC to a number of organizations and technical committees, including Transportation Association of Canada (TAC) committees, Ontario Road Builders Association (ORBA) Structures and Concrete Paving Committee, American Concrete Institute (ACI) committees, Good Roads Municipal Concrete Liaison Committee. Concrete Ontario Technical Committee, and the Canadian Airfield Pavement Technical Group (CAPTG).

Technical Assistance and Research

Another key role of the CAC technical staff is to respond to the numerous technical inquiries from government agencies,



CAC released an updated report on Portland-limestone cement in August 2023.

[...] we promote the many benefits of concrete pavements, cement-based roadway solutions and use of PLC ...] ??

consultants and contractors on concrete pavement and cement-based roadway solutions. This includes providing current and relevant documentation on LCCA, LCA, PLC, low-carbon concrete, concrete pavement repair and specification reviews. Design assistance for conventional concrete pavement and roller-compacted concrete (RCC) design is also another important function of the CAC technical staff, helping to ensure equivalent concrete and asphalt designs are being compared. A few key accomplishments in 2023 are described below.

- 1) Technical Assistance of Soil Stabilization for City of Chatham-Kent CAC staff responded to detailed questions from engineering staff at the City of Chatham-Kent on geotechnical requirements to tender a cement-stabilized soil project. CAC staff also provided a detailed list of geotechnical information required for an engineering firm to develop a proper mix design for a cement stabilization project.
- 2) Department of National Defense (DND) Technical Support We responded to technical questions on ironstone content allowed in concrete mixes and use of galvanized dowels in concrete pavement instead of epoxy-coated dowels and we also provided technical support on concrete overlays of asphalt runways and winter concrete pavement construction.
- 3) Stantec Questions on GUL versus GU Cement The CAC responded to questions from Stantec on the GUL versus GU cements. The PLC Technical Summary document was sent to the Stantec representative to show the testing and performance of GUL versus GU cements. Comments were also made on the finer blaine of GUL cement and that the concrete mix design would need to be changed due to the increased water demand for GUL-based concrete. It was stressed that the mix design adjustment is not simply a straight replacement of GU cement with the GUL cement.
- 4) Spragues Road Concrete Overlay Condition Assessment To assist in the development of a brochure on concrete pavement that included case studies, we coordinated the hiring of Englobe to do a condition assessment of the Spragues Road concrete overlay in the Region of Waterloo. The review showed the pavement has performed very well over its eight-year life, with only 1.5 % of the 3,666 slabs showing any sign of deterioration only one slab showed severe deterioration and five slabs showed moderate deterioration. CAC technical staff was key in setting the assessment parameters and reviewing and commenting on the document before it was publicly released.



THE FOCUS FOR THE CODES AND STANDARDS WORK IS TO CONTINUE TO ALIGN with the industry's commitment to Net-Zero concrete by 2050. Tasks that stem from our action plan were prioritized for the short-term until 2030.

Codes and Standards operate at the core of the CAC mandate to serve the best interests of our members. Technical expertise supports our advocacy with the government and provides the framework for the industry's market share.

Four key pillars form the strategy of the Director Codes and Standards' work, with the goal to facilitate new cement and concrete products acceptance, as well as to protect our market share. These pillars are:

- 1) Develop and/or improve the acceptance criteria for our products.
- 2) Improve the design standards for the end product, that is, reinforced concrete. Improved design guidelines make reinforced concrete structures a more attractive solution in terms of economy, safety, resiliency, sustainability, and versatility.
- 3) Advocate for concrete as the material of choice compared to the other competing materials, such as wood and steel. Develop an allied network of academics and consultants to improve our influence in code committees.
- 4) Support and propose research projects that provide the scientific evidence to support our advocacy within the government and the industry priorities.

National Building and Fire 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. The next edition of the NBCC will be published in 2025. Key NBCC issues currently being addressed by the CAC include:

NBCC New Governance Model

The Government of Canada, along with the National Research Council (NRC), lead the development of an agile, inclusive, responsive governance system as it pertains to the effectiveness of the harmonized code development system. The CAC participates in the Industry Advisory Council, where we provide feedback on priorities and implementation considerations and other coderelated policy concerns.

Four key areas were identified and agreed on through the new governance structure.

- Climate change mitigation
- Climate change adaptation
- Accessibility
- Performance-based Codes

For each priority area, an implementation roadmap was developed. The roadmaps outline the tactics to be used for the upcoming technical changes in the 2025 and the 2030 NBCC. It is worth noting that reduction in operational GHGs for buildings has been prioritized for implementation in the 2025 National Energy Code (NECB), while target reductions in embodied GHGs were prioritized for the 2030 NECB.

Each of these roadmaps presents opportunities to advance various elements needed to support the implementation of our Net-Zero Action Plan. The new governance model presents new opportunities and challenges with respect to influencing the code development system. More direct government oversight will hopefully lead to more rapid consideration of climate priorities, but it also politicizes the process in a manner that the industry will need to adapt to. Optimizing our strategic engagement in this new model will be a priority for the CAC in 2024.

Our Advocacy Efforts

Increasing coordination with the PCA

We share many opportunities and challenges with our U.S. colleagues when it comes to advancing codes, standards and specifications. CAC staff Stamatina Chasioti and Tim Smith were pleased to attend the Portland Cement Association's cement and

Optimizing our strategic engagement in this new model will be a priority for the CAC in 2024."



CAC's Stamatina Chasioti and Tim Smith attended the Portland Cement Association's cement and concrete standards and specifications technical session.

concrete standards and specifications technical session for the second consecutive year in June 2023 in Washington, D.C. as part of an effort to draft "low-carbon cement" quidelines.

CSA Standards – Cement and Concrete Activities

CAC participates in the development of CSA standards, including CSA A3000 Cement; CSA A23.1 Concrete; CSA A23.3 Design of Concrete Structures (as Secretary of the committee); CSA S413 Parking Structures; CSA S850 Design and assessment of buildings subjected to blast loads, and the CSA S6 Bridge Code.

Significant updates to key CSA standards are anticipated in the coming months, including those noted below. For details on the most relevant changes included in these updates, please contact Stamatina Chasioti, CAC's Director of Codes and Standards.

2023 edition of the CSA A3000 (NEW)

The 2023 CSA A3000 draft will be published within the next months.

2024 edition of the CSA A23.1/.2 (NEW)

The 2024 edition of the CSA A23.1/.2 will be published within the next months.

Recycled Aggregate

There are changes underway in CSA A23.1 to permit the use of recycled aggregate in structural applications. Two categories of recycled aggregate were considered:

- Reclaimed concrete material (RCM): RCM is concrete material made from after-use hydraulic cement concrete obtained from demolition of built concrete elements such as sidewalks and concrete pavements.
- Returned hardened concrete (RHC): RHC is concrete material made from unused plastic concrete from known sources that has been returned directly to the concrete plant or obtained from in-plant concrete waste streams, which is allowed to harden and then processed by crushing.

Concrete Design

The 2024 CSA A23.3 draft is currently in public review and it will be published within the next year.

Canadian Highway Bridge Design Code S6 (CHBDC) (NEW)

A new edition of the Code is about to be published. A highlight of the work we are doing is to provide guidance about durability of concrete using performance-based criteria and testing methods for durable low-carbon concrete with a combination of corrosion-resistant reinforcing bars and increased concrete cover.

Publications

The 5th edition of the Concrete Design Handbook is being updated following the release of the 2020 NBCC 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 (EB101) 9th edition was published in January 2022. The new edition includes updates on PLC, sustainability, aggregate pyrrhotite and UHPC. This publication is the main material education text of the Association.

Going digital and offering subscriptions

Both the Design and Control of Concrete Mixtures and the Concrete Design Handbook are now offered in digital format for the convenience of students and practitioners working remotely. The new digital format is compatible with programs that offer accessible formats using the web tool plugin for people with disabilities. We also offer institutional and corporate subscriptions to our publications exclusively online.



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