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Organisation for Economic Co-operation and Development Secretary-General Mathias Cormann at the Environment Policy Committee (EPOC) Ministerial Meeting.

In Conversation: CIB Chief Executive Officer Ehren Cory speaks with OECD Secretary-General Mathias Cormann



Ehren Cory
CEO, CIB

The OECD has said that the magnitude and urgency of the climate crisis calls for a new holistic public governance approach to infrastructure to make the green transition happen. Why are infrastructure banks like the CIB and the private sector more generally important, especially with governments facing high deficits, growing inflation and debt?

MC: Indeed, the OECD's Infrastructure Toolkit underlines the need for new public policy and expenditure tools to meet the Paris Agreement's climate objectives. This includes harnessing new sources of financing: governments cannot fund the necessary and massive transformation in our energy and transportation infrastructure on their own. Infrastructure banks and private investments have a crucial role to play in addressing current shortfalls in net-

zero and climate resilient investments. They also support governments' sustainable investment objectives, by helping to mobilize private capital, align public and private finance objectives, and tap into international sources of finance. They can also help shape the pipeline of infrastructure projects, ensuring individual projects respond to clear needs while promoting the sustainable transition. Further, infrastructure banks can contribute

to better reporting practices in this area by helping to define clear environmental, social and governance criteria, and to collect data needed to measure the sustainability performance of the infrastructure assets.

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In Conversation

EC: What can Canada learn from other countries about using infrastructure to tackle climate change and do you have some good global examples of how projects from other infrastructure/development banks have resulted in great socio-economic gains?

MC: While new infrastructure often gets the spotlight, given it will lock in emissions pathways well into the future, countries are looking at all stages of the infrastructure lifecycle to meet sustainability goals. This includes ensuring that existing infrastructure is resilient in the wake of our changing climate, and the growing exposure to natural disaster risks.

Second, our work shows the importance of involving all levels of government in sustainable infrastructure planning and investments. After all, 60 per cent of public investment in infrastructure is made at the sub-national level.

Third, we have found that governments can make progress on sustainable infrastructure investment by improving the clarity of their environmental objectives and the plans by which infrastructure investment will help to deliver on such objectives. For example, Canada's 'Investing in Canada Plan' includes a specific funding stream dedicated to investments that support a transition to a clean growth economy in provinces and territories.

Finally, there are numerous examples of countries accelerating mechanisms that incentivize and support private investment in green

infrastructure. For example, the European Green Deal Investment Plan will mobilize at least EUR 1 trillion in sustainable investments by 2030 and will provide a European Union budget guarantee so the European Investment Bank Group and its partners invest in more projects, including higher-risk projects. The United States is launching a US\$27 billion green investment bank, offering grants to deploy low or zero-emissions projects. In 2021, the United Kingdom launched its Infrastructure Bank, providing GBP 22 billion of infrastructure finance and partnering with the private sector and sub-national government to finance green investment.

While it is still early days for the new infrastructure banks, existing banks have created socio-economic gains over time. For example, investments by the European Investment Bank Group backed by the Juncker Plan's European Fund for Strategic Investments, which started in 2014, is expected to have lifted the EU's gross domestic product by 1.8 per cent and created 1.7 million jobs by 2022.



OECD Secretary-General Mathias Cormann with U.S. Secretary of State Antony Blinken, at the OECD.



OECD Secretary-General Mathias Cormann.

“ The OECD is a force for good in the world. All of us have a collective responsibility to use it to its full potential. Our core purpose, under our Convention, is to preserve individual liberty and to increase the economic and social well-being of our people.”

– OECD Secretary-General Mathias Cormann

In Conversation

EC: What are the other infrastructure development banks like the CIB? How has the CIB's model informed creation of similar infrastructure investment vehicles in the U.K., U.S. or elsewhere?

MC: Like in Canada, most OECD countries now have institutions that help attract private investment, allocate capital, provide technical expertise, extend credit and provide liquidity and guarantees. As well as the U.S. and U.K. examples I mentioned earlier, today there are at least 28 green infrastructure banks across 12 OECD and non-OECD countries. Green infrastructure banks use innovative transaction structures, risk-reduction and transaction-enabling techniques, and local and market expertise to channel private investment, including from institutional investors, into domestic low-carbon, climate-resilient infrastructure.

While in the past, infrastructure banks often focused on project preparation, value for money of public-private partnerships and finding further external

“*The CIB is the only infrastructure bank we surveyed that engages relevant stakeholders at all levels of government in infrastructure finance, which is also a best-practice function.*”

OECD Secretary-General
Mathias Cormann

sources of funding, more recently their focus has expanded to include sustainability and green considerations.

The OECD report, *OECD Institutional Arrangements for the Planning, Financing and Delivery*

of infrastructure, shows that the CIB exhibits all the best-practice functions when compared with similar institutions in OECD countries. These best-practice functions include exploring new approaches to project finance and delivery, providing technical assistance to make projects commercially viable, attracting investment from private and institutional investors and providing financing and investment for new projects.

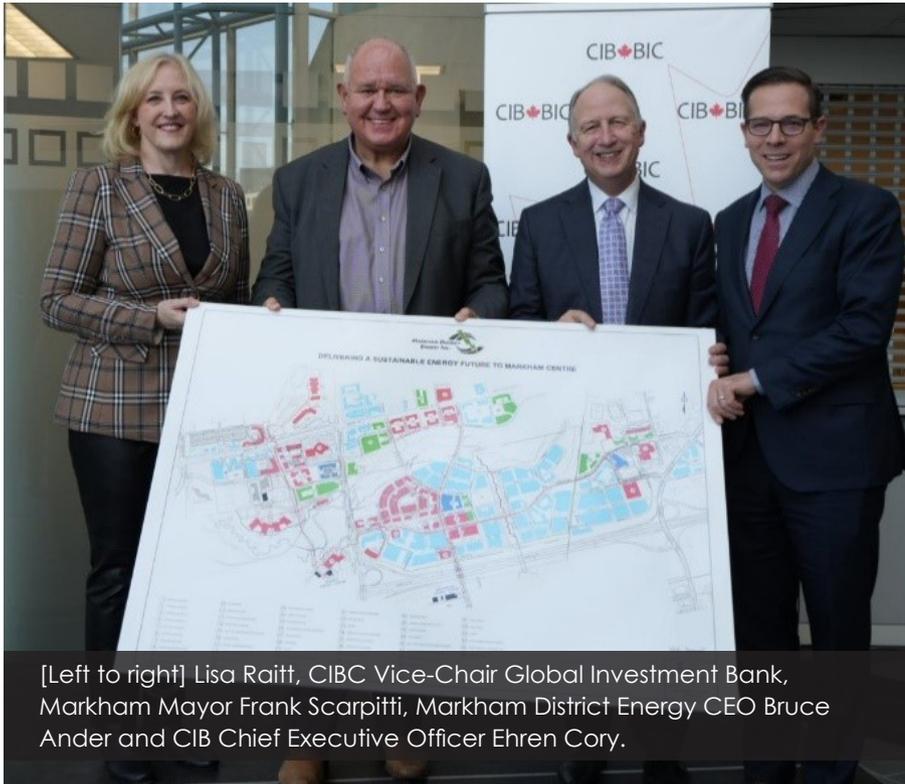
The CIB is the only infrastructure bank we surveyed that engages relevant stakeholders at all levels of government in infrastructure finance, which is also a best-practice function. It therefore provides a valuable example for other jurisdictions to consider when designing infrastructure bank policy frameworks.



Secretary-General Mathias Cormann and Romanian Prime Minister Nicolae Ciucă at the OECD.



OECD Secretary-General Mathias Cormann and Ukrainian Prime Minister Denys Shmyhal at the OECD.



[Left to right] Lisa Raitt, CIBC Vice-Chair Global Investment Bank, Markham Mayor Frank Scarpitti, Markham District Energy CEO Bruce Ander and CIB Chief Executive Officer Ehren Cory.

Underground thermal networks key to net-zero emissions goal

CIB helping buildings to improve efficiency, cut GHG emissions

A path for Canadian cities to achieve their net zero ambitions can be found in the highways of large pipes running underground which connect buildings to centralized heating and cooling systems known as district energy networks.

Buildings are the third-largest source of greenhouse gas (GHG) emissions and energy consumption, accounting for about 18 per cent of Canada's carbon output, including from the generation of electricity.

Updating windows, adding insulation and modernizing internal systems can make a big difference. But achieving large-scale emission reductions in buildings can only be attained by adopting thermal energy networks to heat and cool them, says Bruce Ander, CEO of Markham District Energy, a municipally owned network in operation since 2000.

He says district energy – something

that has been used widely in Europe for at least 50 years and dates back to hot water-heated baths of ancient Rome – is the missing grid. Instead of each building having its own plants to produce hot and cold water as well as air conditioning, structures are tied to a closed-loop underground distribution system known as a thermal grid.

District energy systems reduce building GHG emissions by using centralized high-efficient HVAC equipment and less carbon-intensive fuel sources such as solar, sewer heat, biomass, cold lake water and ground heat. A community-scaled system can more easily adapt new technology because higher upfront capital costs can be shared among many buildings.

"If you truly want to talk about getting to net zero by 2050, if you have an urban centre developing, you need to have a thermal energy strategy and that is district energy, so that's the secret weapon," Ander

said at an event announcing a \$270-million partnership with the Canada Infrastructure Bank (CIB) and the CIBC to expand its district energy network in the City of Markham, northeast of Toronto. Markham District Energy and the city itself have the shared goal of being net zero by 2050. CIB financing supports the reduction of this output by as much as 35,000 tonnes, he said.

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Bruce Ander, CEO of Markham District Energy

Markham District Energy is the CIB's third partnership in this sub-sector, raising its total investments to approximately \$1 billion. Enwave in Toronto was the first and largest at \$600 million while Lulu Island in Richmond, B.C. closed at \$175 million. Total capital spending on the projects is \$2.5 billion.

Russia, China and the European Union lead the way when it comes to district heating but its use in Canada has been growing over the last decade or two, much of it municipally led, said Rob Thornton, CEO of the International District Energy Association.

District energy is a key component of the City of Toronto's plan to reduce emissions from buildings and help achieve its net-zero target by 2040. Enwave Energy Corp.'s system in Toronto, for example, extracts cold water from the depths of Lake Ontario to cool more than 80 buildings within the downtown core.

Underground thermal networks key to net-zero emissions goal

District energy systems leverage economies of scale by aggregating heating and cooling needs of multiple buildings, enabling investment in lower-carbon resources and energy-sharing of thermal energy across millions of square feet of connected buildings, Thornton added.

"For example, heat from a sewer main or data centre can be recovered and utilized as a source of thermal energy, rather than being dumped or discharged, making it a win-win for the local economy and environment."

Since 2000, 2.7 billion square feet of space has been connected to district energy systems, primarily in North America and the Middle East, he said.

The private sector, including pension funds, has increasingly taken a shine to existing district energy systems because they generate predictable and stable returns, Thornton said, pointing to Brookfield Infrastructure selling its Enwave business in 2021 for about \$4.1 billion, partially to the Ontario Teachers' Pension Plan. But district energy systems have trouble attracting the growth capital to expand their systems and deliver additional energy savings.

While the economic case of an investment is paramount, customers and investors are increasingly expecting companies

to behave ethically and develop ESG (Environmental, Social and Governance) and Sustainability strategies, Ander added.

Thornton said infrastructure banks like the CIB are needed as credit participants because of the upfront risks from such capital-intensive programs.

““ *This is a good deal for us at CIBC, no question about it. However, the reality is that CIB coming in makes a lot of the uncertainty and a lot of the risk much more manageable for the private sector.”*

Lisa Raitt, CIBC's Vice Chair Global Investment Banking and a former federal Conservative cabinet minister

A core component of the CIB mandate is to create innovative financing solutions to attract private capital. It did so with CIBC by providing sufficient cushion to address risks associated with building

out the Markham District Energy system that will result in a sizable annual reduction of greenhouse gas emissions.

CIB Chief Executive Officer Ehren Cory said bringing in a private financing partner with the municipally owned district energy company is the ideal mix for the infrastructure bank, whose primary mission is to accelerate change and reduce carbon emissions.

He said the CIB's participation allows the Markham District Energy project to be "bigger and bolder" than could otherwise be done using traditional approaches.

"It's long-term infrastructure that sets us up for the net-zero future," he said. "And it's the kind of infrastructure that without a nudge from somewhere like the CIB gets done piece by piece."

Lisa Raitt, CIBC's Vice Chair Global Investment Banking and a former federal Conservative cabinet minister, said public-private partnerships are going to be increasingly required for many infrastructure projects because they are very ambitious and new.

"This is a good deal for us at CIBC, no question about it. However, the reality is that CIB coming in makes a lot of the uncertainty and a lot of the risk much more manageable for the private sector."



Markham District Energy's facility delivers energy to buildings in the form of hot water and chilled water to heat and cool building space.

[Left to right] Sharon Fleming, Director of Calgary Transit, Jyoti Gondek, Mayor of Calgary and Ehren Cory, CEO of the Canada Infrastructure Bank.



Canadians getting charge out of new electric buses

CIB helping municipalities and school boards to accelerate bus purchases

Canadian bus manufacturers have a welcome challenge on their hands: keeping up with the growing demand for electric buses amid a concerted national effort to curb greenhouse gas emissions.

Dozens of transit authorities and school boards from coast to coast are making the switch from diesel. Although the initial cost for quiet electric transit buses, for example, can be double or triple fossil-fuel powered versions, each vehicle can save about \$50,000 per year from lower maintenance and electricity prices. And the benefits of e-buses are expected to grow as purchase prices move to parity within the decade with expected decreases of battery costs.

Marco D'Angelo, president and CEO of the Canadian Urban Transit Association, says the Canada Infrastructure Bank (CIB) is helping to accelerate the electrification of city bus fleets by encouraging large

orders rather than each municipality buying a few at a time on a pilot basis.

"It's really been the leadership role that the CIB has taken as a catalyst in, I think, clearing many of the financial and operational obstacles that existed for local transit agencies to decide that they wanted to take the leap from conventional diesel or natural gas," he said.

Calgary Mayor Jyoti Gondek says adopting more efficient and sustainable public transportation is just one of the ways municipalities are reducing carbon emissions to address climate change.

She says Alberta's largest city is getting "a great return on investment" from its order for 259 ZEBs by investing \$100 million along with receiving \$165 million in CIB loans and millions in government grants.

"Our partnership with the Canada Infrastructure Bank has been critical to make sure that we can acquire a

“It's really been the leadership role that the CIB has taken as a catalyst in, I think, clearing many of the financial and that existed for local transit agencies to decide that they wanted to take the leap from conventional diesel or natural gas.”

Marco D'Angelo, president and CEO of the Canadian Urban Transit Association

Canadians getting charge out of new electric buses

zero-emission fleet much quicker than we would have done on our own.”

CIB Chief Executive Officer Ehren Cory said the Crown corporation is a key investment partner to significantly increase access to sustainable public transit and the Government of Canada’s goal of 5,000 ZEBs.

“Electric buses are one of the easiest ways to reduce greenhouse gas emissions from the transportation sector that accounts for 25 per cent of carbon output in Canada,” he said.

The CIB is helping to accelerate the reduction of carbon emissions from transit fleets by covering the higher upfront capital costs of zero-emission vehicles compared with diesel buses. It has committed more than \$1 billion so far to help transit agencies in Brampton, Edmonton, Ottawa, Durham Region and Calgary, and nearly \$500 million towards school bus operators in Quebec and B.C. to modernize their fleets.

Lion Electric Company, one of

“Our partnership with the Canada Infrastructure Bank has been critical to transitioning our fleet to zero-emission vehicles much quicker than we could have done on our own.”

Jyoti Gondek,
Calgary Mayor

several Canadian manufacturers of these vehicles, says its order books have never been fuller amid growth fuelled in part by jurisdictions joining the global push to reduce greenhouse gas emission targets.

“Well, it is a good time. I mean, obviously, there’s a big hype about

going electric, especially in the school bus transportation world because it makes sense,” says Patrick Gervais, the Quebec company’s vice-president of marketing and communications.

Winnipeg-based bus manufacturer New Flyer (NFI) said it is enjoying record bidding activity with unprecedented government funding in Canada and the United States.

“Our sales, bid, engineering, and operations teams have all been extremely busy in 2022. We’ve received new orders (firm and options to backlog) for more than 3,800 units and delivered the highest number of quarterly bids ever in the third quarter of 2022,” said Stephen King, vice-president, strategy and investor relations.

NFI (or New Flyer) anticipates this strong growth will continue as transition to electric accelerates.

“But the transition still takes time. It’s an evolution, not a revolution,” he said.

Outcomes and key metrics:



Max Graham
Chief Performance Officer at Avenue Living.



COMMUNITY OF CIB: Meet Max Graham Chief Performance Officer at Avenue Living

In my role at Avenue Living, an owner and operator of residential properties primarily located in western Canada's prairie provinces, I work on improving building efficiency and optimizing resident experience through projects such as building retrofits.

The CIB, and its proven experience in enabling large-scale building retrofits, was the natural partner to help us advance upgrades to our low-rise, multi-family rental apartments. We worked closely with the CIB team to develop an investment plan that would result in positive outcomes for both the residents of our buildings and the environment.

Through this partnership, the CIB has committed \$120 million towards retrofitting 132 buildings in Avenue Living's portfolio across Alberta and Saskatchewan. The result? Better energy efficiency and environmental sustainability at over 6,700 residences.

These projects include the installation of on-site power generation, bringing new low-carbon heating and cooling systems online and introducing smart technologies and water management systems to reduce utility costs for renters.

I'm proud of what we will accomplish with the help of the CIB, modernizing more buildings, and in turn, improving the day-to-day experiences of approximately 10,000 residents.

CIB  BIC

Sustainability and Impact at the CIB



December 2022

Sustainability

The Canada Infrastructure Bank (CIB) is contributing to Canada's transition to a low-carbon economy by investing in infrastructure projects that achieve positive sustainable outcomes for Canadians.

In our recently released "Sustainability and Impact at the CIB" publication, we share details of our efforts including the impacts we are achieving and how we are advancing our commitment to net zero by 2050.

Since establishing operations in 2018, the CIB has closed on investments that will generate a more than 4.5 million MT reduction in GHGs, a number that continues to grow.

The 61-page document outlines the CIB's sustainable investment initiatives such as our Building Retrofits Initiative, Zero-Emissions Bus (ZEB) Initiative, Indigenous Infrastructure and the Charging and Hydrogen Refuelling Infrastructure Initiative.

Investments in Dream Retrofits, Manitoba Fibre, Tshuëtin Railway and Montreal's automated light rail network Réseau express métropolitain (REM) are highlighted.

The report is available [here](#).

OUR PARTNERSHIPS

MARKHAM DISTRICT ENERGY (MDE)

- **\$270** million investment
- Expansion of Markham District Energy's (MDE) clean power project northeast of Toronto
- The project is expected to reduce 33,700 tonnes of greenhouse gas emissions annually, and will help MDE to expand its service area, connect more buildings to its low-carbon district energy network and create economic spinoff benefits
- The partnership will support the City of Markham's goal of achieving net zero emissions by 2050



Markham District Energy (MDE) with expanding its service area.

[Read more](#) 

AFOA PROJECT FINANCING CERTIFICATION

- Collaboration on new certification program
- Develop a project financing certification program that will strengthen the capacity of Indigenous peoples and communities to structure and manage large infrastructure projects
- The new certification program will empower Indigenous communities to better understand project financing for large infrastructure projects and provide participants with more confidence to work with external consultants
- The program developed by AFOA Canada (formerly known as Aboriginal Financial Officers Association) in partnership with the CIB and TD Bank Group will include modules on risk management, project financing, contracting and asset maintenance



New certification program aimed at closing the infrastructure gap.

[Read more](#) 

PORT STALASHEN WASTEWATER

- **\$6.4** million investment
- Development of a new wastewater treatment plant in Port Stalashen, on shísháhl Nation lands near Sechelt, B.C.
- The new facility will serve 91 residential units and 88 buildings, enabling economic growth, protecting the coastal environment, and safeguarding public health for more than 1,500 community members and land lessees
- The plant's additional capacity will allow the shísháhl Nation to develop and connect future high-density residential housing developments and tie in future developments within the District of Sechelt



Modernize aging water treatment infrastructure.

[Read more](#) 

GREEN BUILDING COUNCIL, IREE CERTIFICATION

- **\$136.6** million investment to retrofit 19 Dream properties across Ontario and Saskatchewan
- This project has received the first Investor Ready Energy Efficiency (IREE) certification from The Green Building Council
- This certification, required for all CIB retrofit projects, will help to enhance investor confidence by providing third-party verification that projects meet desired energy targets
- By requiring IREE certification, the CIB is encouraging a standardized process of developing and financing projects and helping to establish energy retrofit investments as a distinct asset class



Avenue Living Energy Retrofits.

[Read more](#) 

Government of Canada announces appointments to the Canada Infrastructure Bank's Board of Directors

The federal government has appointed two people to the Canada Infrastructure Bank's Board of Directors, replacing James Cherry and Christopher Hickman who were on the board since the bank's inception in 2017.



Andrée-Lise Méthot

- Ms. Méthot is the founder and managing partner of Cycle Capital, a leading investment and innovation platform, as well as the founder and chairperson of Accelerator Cycle Momentum. She is a member of the Paris Fonds Vert Advisory Board, the Government of Canada's Task Force on Women in the Economy, and an ambassador in clean technologies for Investissement Québec.
- Ms. Méthot is an Officière de l'Ordre national du Québec and received the Grand Prix d'excellence from the Ordre des ingénieurs du Québec.
- She holds a Master's degree in Science from Université de Montréal and a Bachelor's degree in Geological Engineering from Université Laval.



Michael Bernstein

- Mr. Bernstein is a currently senior advisor with the Boston Consulting Group and president of Juno Advisors Ltd., and formerly the President and Chief Executive Officer of Capstone Infrastructure Corp.
- He was also a senior managing director with Macquarie.
- Mr. Bernstein holds a Bachelor of Arts in Economics and Philosophy from Dartmouth College and an MBA from Ivey Business School at Western University.
- He also holds Chartered Financial Analyst and ICD.D designations.

“

I'm pleased to welcome Andrée-Lise Méthot and Michael Bernstein, both of whom bring a depth of experience that will make them valuable contributors to the future of the CIB. At the same time, we say goodbye to two members of the inaugural CIB Board of Directors. James Cherry and Christopher Hickman provided their expertise and advice to management in helping to stand up the CIB and building this organization.”

– CIB chairwoman Tamara Vrooman



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