

How The Edmonton Convention Centre Became Canada's Largest BIPV System (So Far)

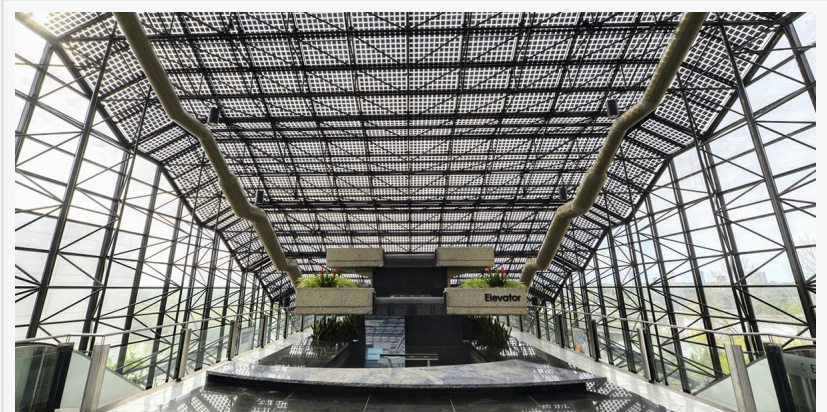
TORONTO, ONTARIO, CANADA, December 8, 2020 /EINPresswire.com/ -- The Edmonton Convention Centre Atrium upgrade is now complete. This way, the Canadian city joins the already extensive list of partners that produce their own clean energy thanks to [Belnor Engineering's Onyx Solar photovoltaic glass](#). The building upgrade will produce 227,000 kWh each year and will help improve climate insulation in the city's extreme temperatures.

The installation of our glass is part of the rehabilitation project for the roof of the main atrium designed by DIALOG. The atrium's cover was built 35 years ago and had serious insulation problems. The installation has in total 1,566 m² (16,856 sqft).

This project makes a statement about the Centre's sustainable ambitions and includes a poetic message for visitors to the Centre and the river valley.

The pattern of the cells opens up to a circular oculus with lines of Morse code that spell out a poem. It is an excerpt of Gifts of a River by E.D. Blodgett, a former Edmonton Poet Laureate, that reads:

"Beginnings just appear so like a



Edmonton Convention Centre Interior View



Edmonton Convention Centre Photovoltaic Skylight Poetic Message Interior View



Edmonton Convention Centre Photovoltaic Skylight Poetic Message Exterior View

drowsy eye

Suddenly awake where a river wells up

Uncoiling from the ice where snug beside the land

It lay dreaming at our feet in quiet sleep.”

The poem is legible from left to right within the atrium, but the visual appeal extends outside and across the valley.

The new solar cells will convert sunlight into clean electricity while maintaining the transparency of the Centre’s current glass atrium. All 696 sloped panels on the atrium have been replaced. Even with the PV cells covering approximately 50% of the surface, more light is getting through to the atrium compared to the previous tinted panels.

It is estimated that more than 200 Megawatt-hours of electricity will be generated each year and that the panels will reduce anticipated greenhouse gas emissions by over 150,000 kg.

The city of Edmonton is one of the leaders of the [Global Covenant of Mayors for Climate & Energy](#), a global coalition of municipal pioneers committed to the fight against climate change. All these mayors acknowledge the importance of decreasing CO2 emissions and they are encouraging the incorporation of innovative technologies and solutions within their cities. More than 10,000 cities of 60 countries around the world have committed to the pact, totaling 320 million people.

Don Iveson, Mayor of Edmonton, signed along with Frans Timmermans, Vice President of the European Commission for the Green Deal, and Michael Bloomberg, former Mayor of New York, the Global Covenant of Mayors for Climate and Energy previously mentioned.

Precisely in the [presentation that Frans Timmermans made during COP25](#) (United Nations Conference on Climate Change) on the Green Deal, he spoke of the urgent need to reform all buildings in Europe, so that they generate their own renewable energy and have better insulation and thus be neutral in emissions by 2050.

DATA FROM FEASIBILITY STUDY OF EDMONTON CONVENTION CENTRE'S CRYSTALLINE SILICON PHOTOVOLTAIC SKYLIGHT

Energy cost: <0,05€

Internal Rate of Return: 9.4%

Payback: <9 years

Total Area: 1,566 m²

Electricity generated in 35 years: 5,389,414 kWh

Total lighting points operating 4 hours per day in 35 years: 10,569 lighting points

CO2 emissions avoided in 35 years: 3,611 Tons of CO2

Barrels of oil saved in 35 years: 3,171 barrels per m²

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