

Leading The Way Heidelberg Materials

Waste
Diversion



Alternative
Fuels



Being a founding member of the CCLP has allowed us to help disseminate our learnings and experiences to our fellow community leaders and has helped to progress the conversation on climate change within the greater community.

Brent Korobanik
Environmental Manager



Background

[Heidelberg Materials](#) is a leading supplier of cement, aggregates, ready mixed concrete and asphalt in North America. They have more than 450 locations and approximately 9,000 employees.

Heidelberg Materials actively advocates for the use of resilient construction materials and supports sustainable construction practices.

Heidelberg continues working on the next generation of sustainable building materials to bring them closer to their goal of carbon-neutral concrete by 2050.

CLIMATE ACTION HIGHLIGHTS



Carbon-Neutral Cement

Heidelberg has entered a partnership with the Government of Canada to build a \$1.36 billion carbon capture, utilization, and storage (CCUS) system and a combined heat and power (CHP) system at its Edmonton cement facility. A first of its kind in North America, this will enable the company to produce carbon-neutral cement through the capture and compression of carbon dioxide (CO₂), reducing greenhouse gas emissions by up to 1 million tonnes annually.



Corporate Climate Leader since 2018



2022 Emissions
540,000 Tonnes of GHGs



Target
Net Zero GHG emissions by 2050



Energy-Efficient Technologies

Committed \$51 Million to a Front-End Engineering & Design (FEED) Study for the carbon capture of 95% of CO₂ emissions at Edmonton Cement plant.



Alternative Fuels Project

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Alternative Fuel System for Edmonton Cement Plant

Heidelberg Materials is constructing an alternative fuel system at the Edmonton cement plant. The ~\$30M alternative fuel project is expected to be on-line at the end of 2023.

Utilizing alternative fuels will allow Heidelberg to burn less natural gas and instead use **low-carbon waste fuels** with **biogenic carbon** content, which are considered to be more sustainable.

Three alternative fuels will be used:

- **Refuse Derived Fuel (RDF):** non-recyclable plastic derived from solid waste sorted at Edmonton's Waste Management Facility.
- **Construction & Demolition (C&D) material:** waste wood that has been sorted, screened and shredded (wood chips).
- **Tire Fibre:** passenger tire recycling, made up of polyester fibres and rubber particles.

BIOGENIC CARBON

Biogenic CO₂ refers to carbon in wood, paper, and other biofuels/mass that was originally removed from the atmosphere by photosynthesis and, under natural conditions, would cycle back into the atmosphere as CO₂ due to decomposition, relatively quickly (1-500 years). This is considered a more sustainable form of carbon than fossil fuels, due to its limited impact on atmospheric CO₂. Conversely, the carbon in fossil fuels would move through the carbon cycle naturally over 10,000 - millions of years. CO₂ released when fossil fuels are burnt significantly speeds up this carbon cycle and increases atmospheric CO₂, leading to climate change.

PROJECT OUTCOMES



120,000 Tonnes
projected annual GHG reduction.
(project reaches full capacity in 2024)



**50% Replacement of
Natural Gas Fuel**
with alternative fuels including biomass
and non-recyclable materials.



Landfill Diversion
The alternative fuel sources will
be diverted from landfills, reducing
pressure on local landfills and
reducing carbon emissions
associated with disposal.

PROJECT BENEFITS



Climate Positive
Values Alignment

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Advancing towards
Net Zero

