

CARBON OFFSETTING OPPORTUNITY FOR THE BUILDING & PUBLIC WORKS (BPW)



Community-based project activity

Energy Efficiency and Solid Waste Diversion Activities within the Quebec Sustainable Community (VERRA registry project 929)



CONTEXT

Cement production is responsible for about 8% of global carbon emissions, and steel production is responsible for about 5%. Both materials are mainly used in the construction of buildings and for public works (BPW), such as bridges, roads, airports, tunnels, schools, hospitals and many others.

Cement production

Cement is used to produce concrete, the most widely used construction material in the world with over 10bn tonnes of concrete used yearly.

Around half of the CO₂ emissions released by cement are difficult to reduce since they mostly result from the chemical reaction that occurs during the production of concrete. These emissions cannot be eliminated by changing fuel or increasing efficiency.

Around 40% of cement emissions come from the burning of fossil fuels to heat kilns at high temperatures. The remaining 10% of emissions results from fuels needed to mine and transport raw materials.

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WE OFFER DULY VERIFIED CARBON UNITS (VCUs) TO ALL BPW PROJECTS AS PART OF THEIR OVERALL EFFORTS TOWARDS SUSTAINABILITY. VCUs ARE AVAILABLE FOR INTERESTED PARTNERS ON LONG-TERM CONTRACTS.

Steel production

Steel demand is a key determinant of energy demand and steel subsector emissions. Global crude steel production increased by 5% in 2018 to reach 1.8 Mt, following a 6% growth in 2017. Initial estimates suggest a 3% growth in 2019. This follows a period of relatively flat demand from 2013-2016.

On average, 1.9 tonnes of CO₂ are emitted for every tonne of steel produced. About 2.8 MtCO₂ per year are solely related to energy use in the iron and steel sector, about 8% of total energy-related emissions. Over 1.3 billion tons of steel are manufactured and used every year. Demand for steel, particularly in developing economies, has seen global CO₂ emissions increase steadily.

Carbon offsetting for the cement & steel sector

Carbon offsetting is a way individuals or organizations to neutralize (cancel out) the footprint of their emissions by investing in carbon reduction projects. In the context of addressing climate change, offsetting is an action that can be undertaken by the BPW sector to compensate for carbon emissions released by the production and the use of cement and steel in their construction projects. The offset can be equivalent in part or in whole to the associated emissions, by financing emissions reduction elsewhere. There are many ways to achieve CO₂e reductions that can be used as offsets, many of which bring additional social, environmental or economic benefits relevant to sustainable development.



THE PROJECT

The reduction project we offer is a project called "Sustainable Community" which brings together micro-projects in energy conversion and efficiency, solid waste diversion activities, and soon transportation, which have been initiated by a developer for an assortment of client facilities located in the province of Quebec, Canada.

The project targets a wide range of "client facilities". Only SMEs that are part of the industrial, commercial or institutional sector, and/or have multiple ownerships, are included in the project. The aggregated GHG emission reductions from small final emitters (SFEs) of GHGs (e.g. warehouses, supermarkets, restaurants, shops, health centres, schools, government and municipal buildings, etc.) raise awareness of civil society participation and provide interesting opportunities for actual GHG emission reductions.

The two main GHG reduction components of the project, with transportation in development:



Conversion and
Energy Efficiency



Waste Diversion

A FEW EXAMPLES OF THE SUSTAINABLE COMMUNITY MICROPROJECTS:



UPA OF MAURICIE

The UPA of Mauricie aims to encourage citizens to bring their autumn leaves and other green residues to agricultural business so they can be reused as compost.



LEMAY ARCHITECTURE

Major renovations that respect high environmental quality principles were made on a century-old building to optimize its energy efficiency. As a result, the building received the LEED Silver certification.



MRC OF TÉMISCAMINGUE

At the MRC's Ecocenter, biomass is recovered, organic waste is composted, and paper is recycled to ensure a better management of residual materials.



KAMOURASKA-RIVIÈRE-DU-LOUP SCHOOL BOARD

The Kamouraska-Rivière-du-Loup School Board converted the oil no. 2 heating systems in 14 school buildings to geothermal systems.



SORTING CENTER OF ARGENTEUIL

The sorting center reuses biomass as a source of energy, and specializes in the recovery and recycling of construction and demolition waste.



HAVRE-AUX-MAISONS SOLAR PANEL PROJECT

Solar panels were installed to replace electricity generated with heavy fuel oil for a residential building located on the Magdalen Islands.



To help you reach your sustainability or carbon neutrality goals.



Contribute to the achievement of the Sustainable Development Goals (SDGs), specifically the SDG 9, 11, 12, 13, and 17.



To increase the impact of your efforts in reducing greenhouse gas emissions.