



Innovation, CCUS key to decarbonizing concrete: Canadian report

Description



A cement industry body and the Canadian government have released a blueprint for the sector to

reach net-zero by 2050, challenging the heavily polluting industry to decarbonize with technology, efficiency and carbon capture. The Roadmap to Net-Zero Carbon Concrete By 2050 report was published by Innovation, Science and Economic Development Canada in cooperation with the Cement Association of Canada (CAC). The CAC is a trade association representing most of the country's cement companies. It identifies concrete as the second-most consumed product on earth, used for all manner of buildings and infrastructure. In Canada, the industry is said to be responsible for 158,000 direct and indirect jobs, and \$76 billion in direct, indirect and induced economic impact. Cement and concrete are also a serious contributor to climate change. Cement contributes to seven per cent of global emissions and 1.5 per cent of Canada's pollution. Canadian firms are expected to produce 55 million tonnes of cement and 400 million tonnes of concrete over the next five years. The report says the cement and concrete industry has committed to reducing more than 15 megatonnes of greenhouse gases (GHGs) cumulatively by 2030. The report lays out a series of paths the industry and government can take to achieve that goal. Ways to decarbonize – The first path deals with clinker, the precursor to cement. Its production is energy-intensive and a major source of the carbon dioxide emissions related to cement. To reduce emissions from clinker, the report prescribes: Rreducing clinker volumes by increasing the volume of decarbonized raw materials; Increasing the use of low-carbon fuels for combustion such as waste-based fuels; adopting clean energy and energy efficiency; and employing carbon capture, utilization and storage (CCUS). For concrete, the report recommends increasing the use of supplementary cementitious materials (SCMs) to reduce GHG emissions. It also notes the importance of: decarbonizing concrete manufacturing and transportation; optimizing the design and construction process to produce less waste; and use of materials built for longevity, adaptive re-use and deconstruction. From government, the report suggests new codes and standards to mandate low-carbon concrete and addressing the issues surrounding the procurement of concrete and cement. Adam Auer, president and CEO of the CAC, said governments have “the potential to be significant market-makers for innovation and to really de-risk the novelty of new low-carbon innovation for the rest of the market.”

Read the full article at: sustainablebiz.ca

Category

1. TheCircularEconomy.com

Date Created

November 22, 2022

Author

thecirculareconomyteam