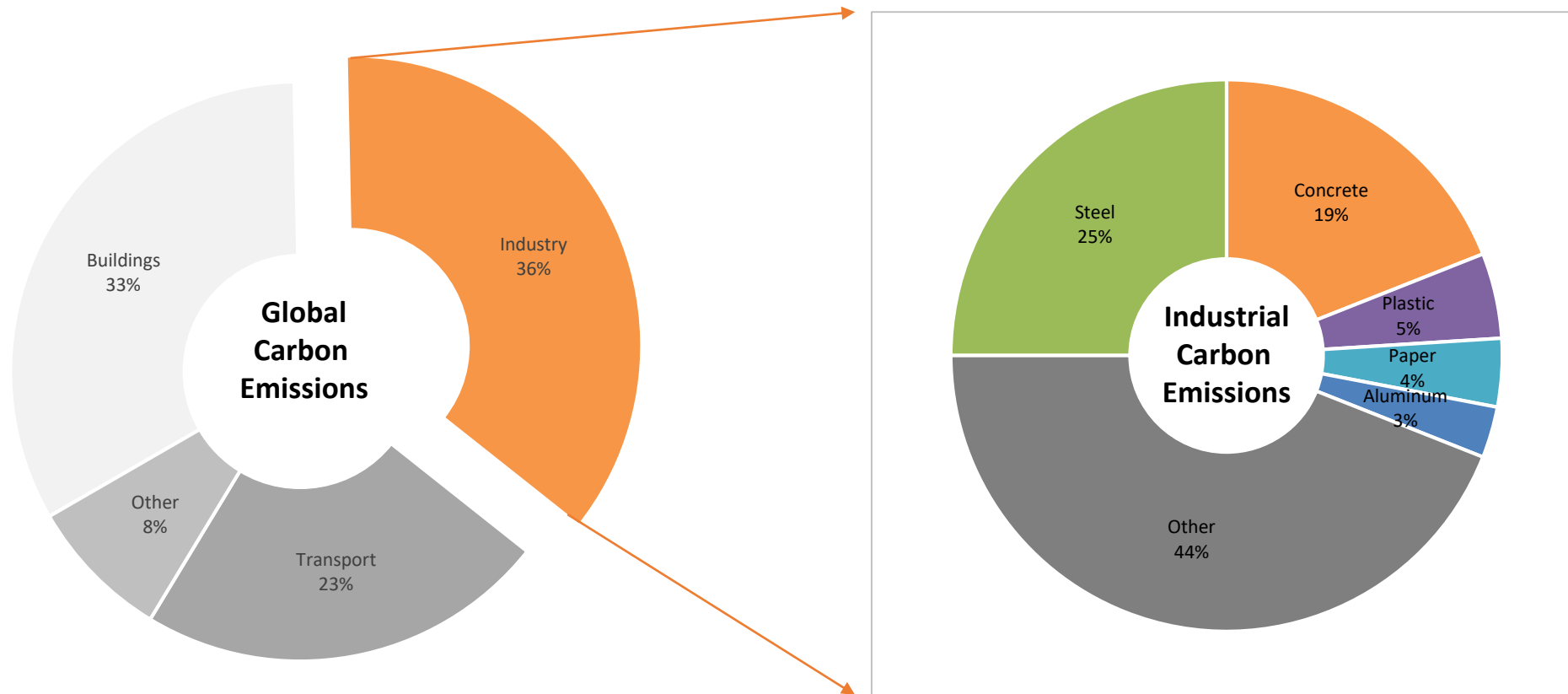


# CO2 Emissions in the Cement Industry

- <https://www.youtube.com/watch?v=GSc9hu9170U>
- The Global Cement and Concrete Association says current global cement production is 4.1 Billion tonnes per **year** and is estimated to increase by 12-23% by 2050
- The Cement and Concrete industry accounts for **7%** of the worldwide CO2 emissions





# VCNA 2030 Sustainability Targets



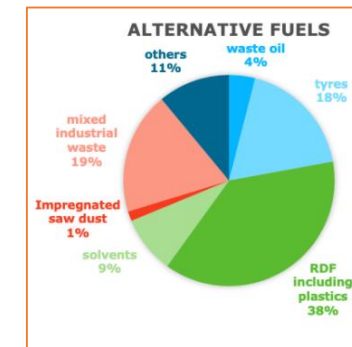
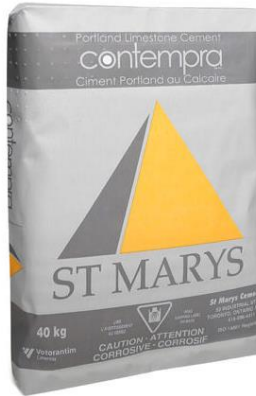
# Sustainability at the St. Marys Plant

- St Marys Cement Plant is actively implementing various programs for reducing overall environmental impact and CO2 Emissions
  - SMC Produces 7 different types of cement with limestone substitution from 3%-44%
    - This means our overall CO2 emissions are decreased by 12,000 tonnes per year
  - SMCs Sales and Sustainability team is focusing on promoting sales of a sustainable product called General Use Limestone Cement (sales name Contempra) which decreases overall CO2 emissions by 10% per tonne sold
    - In 2011 the Quality Control Department at St Marys Plant was pivotal on a project with the Ministry of Transportation Ontario and the Portland Cement Association that proved General Use Limestone Cement with limestone substitution up to 11% had similar strengths and set times as standard General Use Cement
    - In 2020 ongoing research at the St Marys Plant is indicating that this limestone addition can be increased to up to 15% to further decrease CO2 emissions

## Contempra Type GUL Portland Limestone Cement

What if there was an innovative cement that could reduce CO<sub>2</sub> emissions by 900,000 tonnes – every year?

Cement and concrete are essential ingredients in building our communities and infrastructure. Engineered for a better tomorrow, Contempra is a contemporary cement that decreases CO<sub>2</sub> emissions by 10% while still producing concrete of comparable strength and durability to that produced with regular Portland cement.



- Worldwide the Global Cement and Concrete Association reports an 19.2% CO2 reduction per tonne of cementitious over the past 30 years as a result of alternative fuels
  - <https://gccassociation.org/concrete-and-sustainability/>
  - In 2016 the Portland Cement Association's Annual Summary Report showed that 80% of US Cement Plants use Alternative fuels as a primary or secondary fuel source
    - Oil, waste solvents, waste tires, plastics, wood waste, biomass, etc).
  - St Marys Cement is actively working on the various aspects required for the alternative low carbon fuels (ALCF) permit. We are working on evaluating different alternatives and designs to feed the alternative low carbon fuels into the process. Once SMC has finished this, we will start the process with the MECP to apply for a permit. We have presented our interest in the CLC to use ALCF. We expect that by the end of this year or early next year we will have the information required to submit an application for the permit to the MECP.

