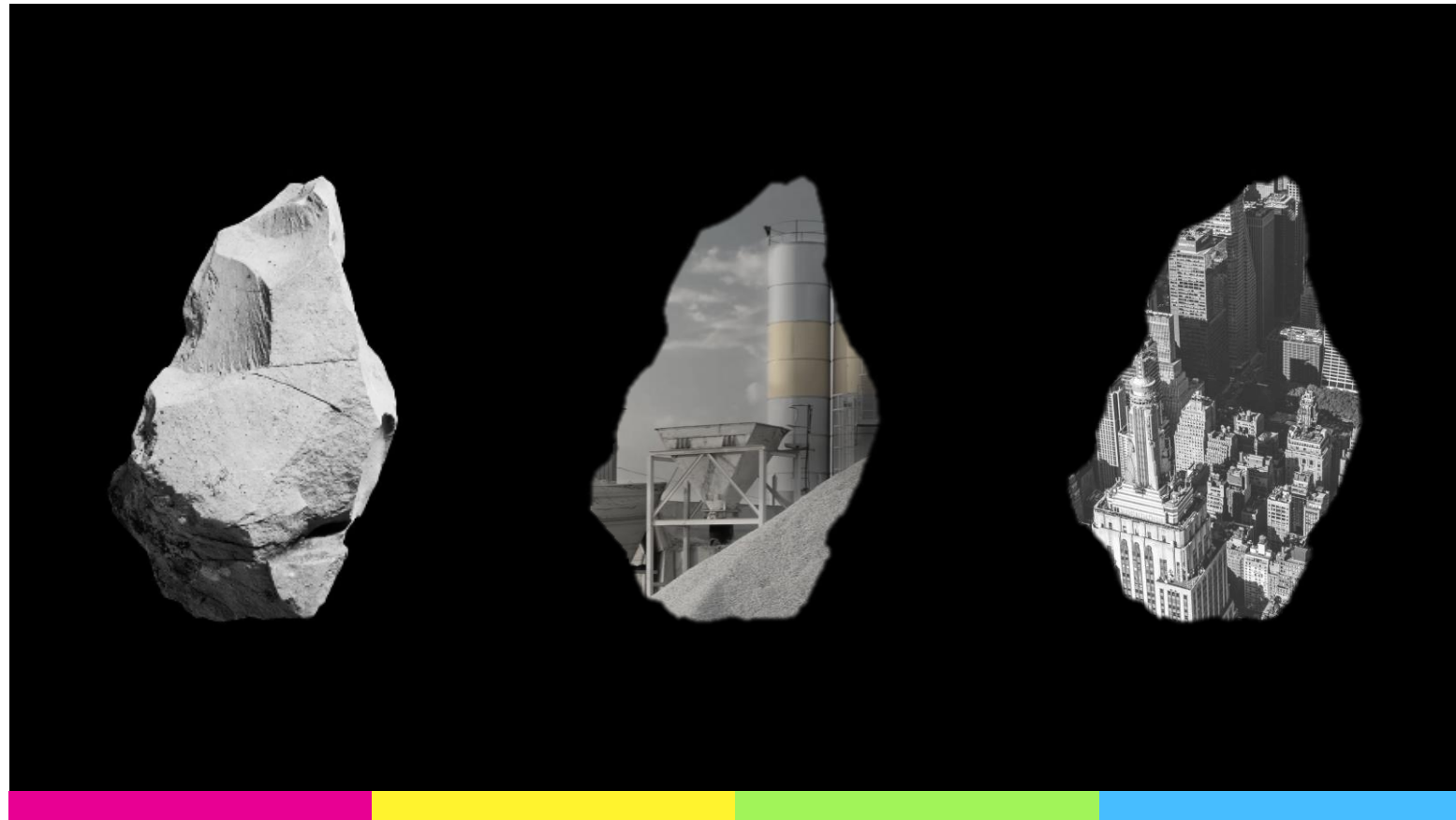


BRIMSTONE

Making cement carbon-negative without
changing the product or price



Cement accounts for 5.5% of global greenhouse gas emissions

Humanity produces 4.3 billion tons of it every year

It is a trillion-dollar opportunity

1T cement ~ 0.8T of CO₂

Our mission is to decarbonize cement



The cement industry has 2 major problems

01 CO₂ EMISSIONS

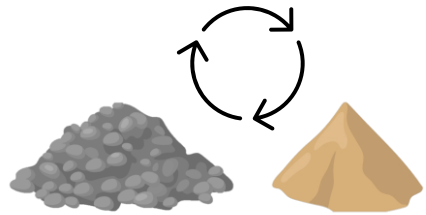
Process emission account for ~ 60% of cement's emissions.

02 SUPPLEMENTARY CEMENTITIOUS MATERIALS (SCM)

SCM are getting scarcer and more expensive.

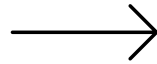


SCMs are waste products from burning coal to make electricity and steel (i.e. fly ash, slag)

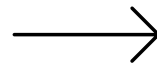


Limestone

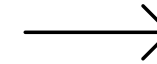
Additives



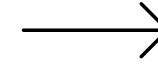
Cement process



Portland cement clinker



SCM



Concrete

Limestone (CaCO₃) + Silicon, Iron, and Aluminum Oxides.

CO₂ is released from:

1. Process emissions, ~60% total emissions.
 $\text{CaCO}_3 + \text{heat} = \text{CaO} + \text{CO}_2$
2. Energy emissions, ~ 40% total emissions.

Portland cement

Clinker is then mixed with SCM

Concrete

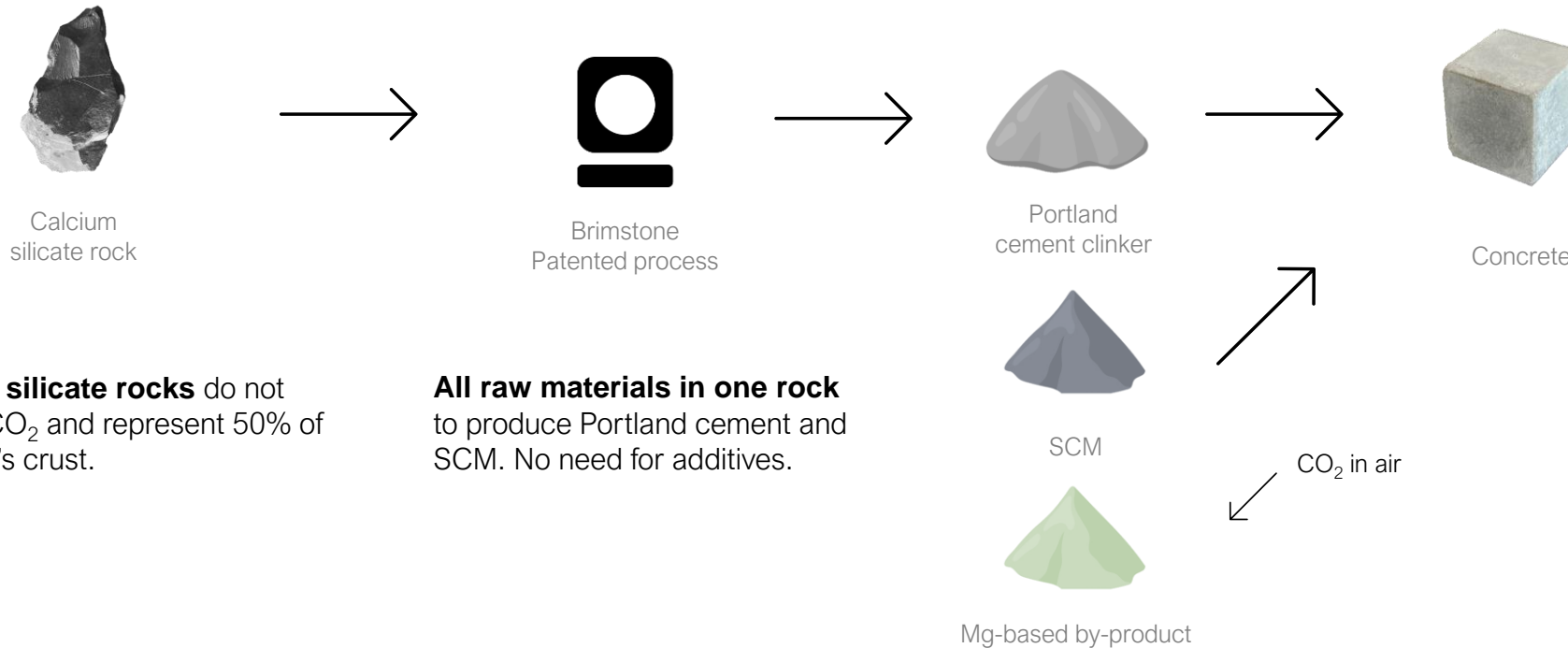
Water and aggregates are added

We profitably eliminate CO₂ from the most produced material on the planet

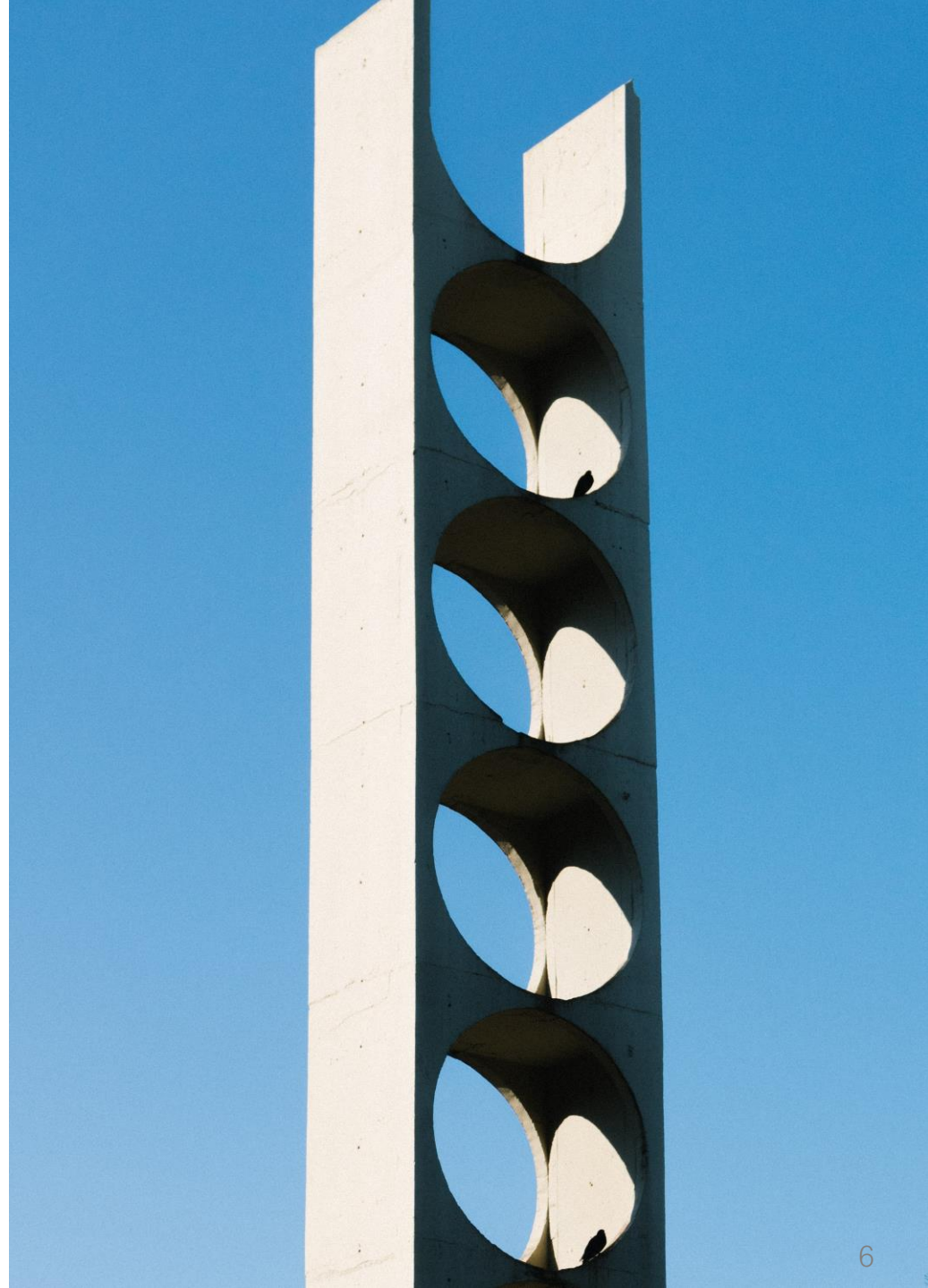
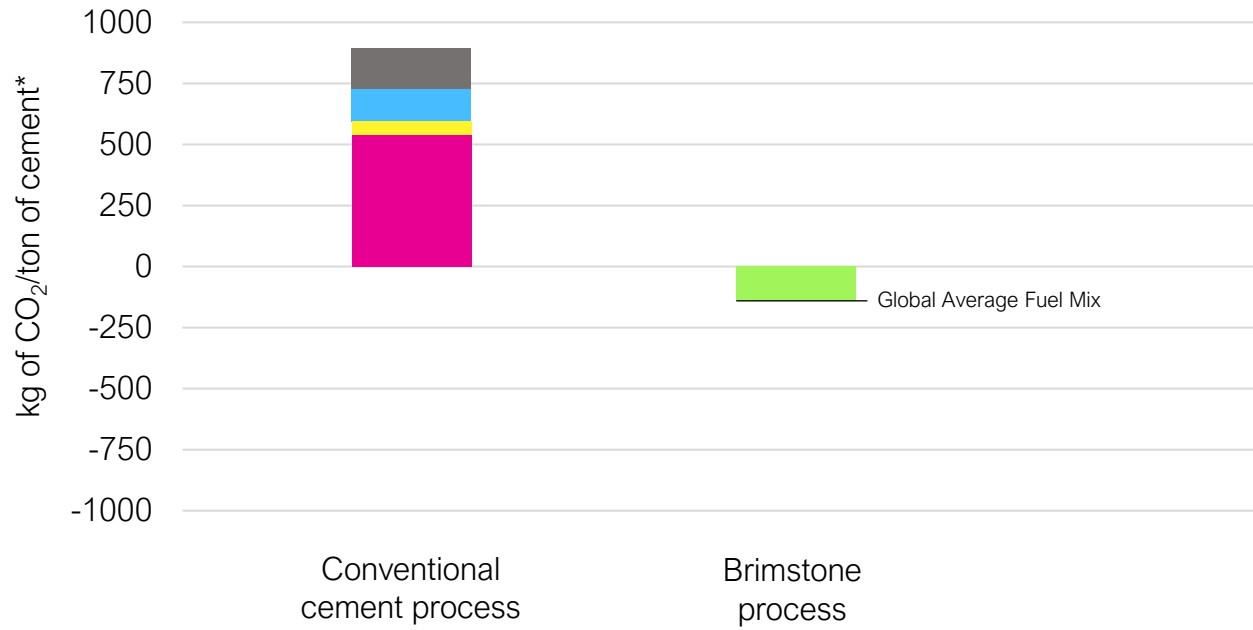
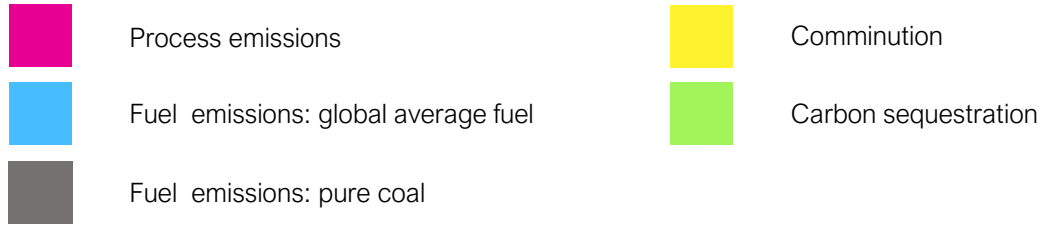
01 SAME PRODUCT
We produce the same product as the industry, ordinary Portland cement.

02 LOWER COST
By producing Portland cement and SCM from one rock.

03 NO EMISSIONS
Mg-based waste product from our process sequesters CO₂.

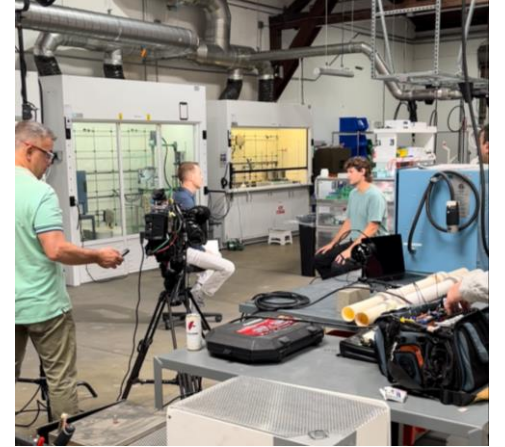


Process carbon intensity comparison



Where is Brimstone today

01 PILOT PLANT ENGINEERING To be built in Reno, NV.



02 PRE-SALE OF COMMERCIAL SCALE PRODUCTS Portland cement, SCM, and carbon attributes.

In summary

- 01 We eliminate emissions from cement production
- 02 We vertically integrate CO₂-free SCM
- 03 Cost parity or better
- 04 We have a path to sequester up to 1 ton of CO₂ per ton of cement



Thank you

info@brimstone.energy

