

Portland or HP2A?

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HP2A © is a new technology developed by Argiwest, a French company, which implements the use of clay based cement for construction purposes.

In 2015, about 10 Gt of carbon in CO₂ were emitted, i.e. 40 Gt of CO₂.

The emissions of CO₂ for cement production amounts approximately to 7% of the total CO₂ emission, or 2.8 Gt per year, practically all of it being from the production of Portland type cement.

Portland cement requires a lot of energy: it is assumed to be in the range of 1700 J.g⁻¹.

HP2A requires 80% less energy than this used for Portland cement.

If only 50% of the construction would move to HP2A in the next three decades, about 1 Gt of CO₂ emissions would be avoided per year.

Assuming a 30 years implementation period, about 8 Gt CO₂ would be spared till 2050 and thereafter another 50 till 2100 assuming a constant production of cement. Altogether this represents approximately 60 Gt of CO₂.

This is an important potential achievement as it also represents 10% of the limit of the CO₂ budget to 600 Gt for IPCC SR1.5°C.

This would give a huge margin, particularly for the BECCS (Carbon storage) which is far from being foreseen for industrial scale.

References:

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