

Carbon removal – pathways, technologies, and need

Shantanu Agarwal

Chemical Engineering, Indian Institute of Technology, Roorkee, India

Harvard Business School, Harvard University, Cambridge, USA

E-mail: sa@susteon.com

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Abstract. Far from being Plan B, carbon di oxide removal is a critical part of Plan A (as laid out by IPCC > 5GT will be needed by 2050). Without removing excess carbon from the air our toolbox is missing a major tool needed to curb climate change. Current global capacity of carbon removal is ~10,000 tons/annum.

This paper will present a summary of current state of technology of carbon removal alternatives, with a specific focus on engineered Direct Air Capture systems. The current energy intensity, capex intensity and cost challenges faced by many of the DAC players will be discussed.

The presentation will also cover nature-based capture methods and current challenges in the measurement, reporting and verification and eventual trading of these carbon credits.

The presentation will present a market view of the potential scale of carbon removal credits in the near future, its demand and potential supply constraints.

Keywords: carbon removal, direct air capture, CCUS, nature-based carbon capture.