

The Global CO₂ Initiative

May 4, 2022

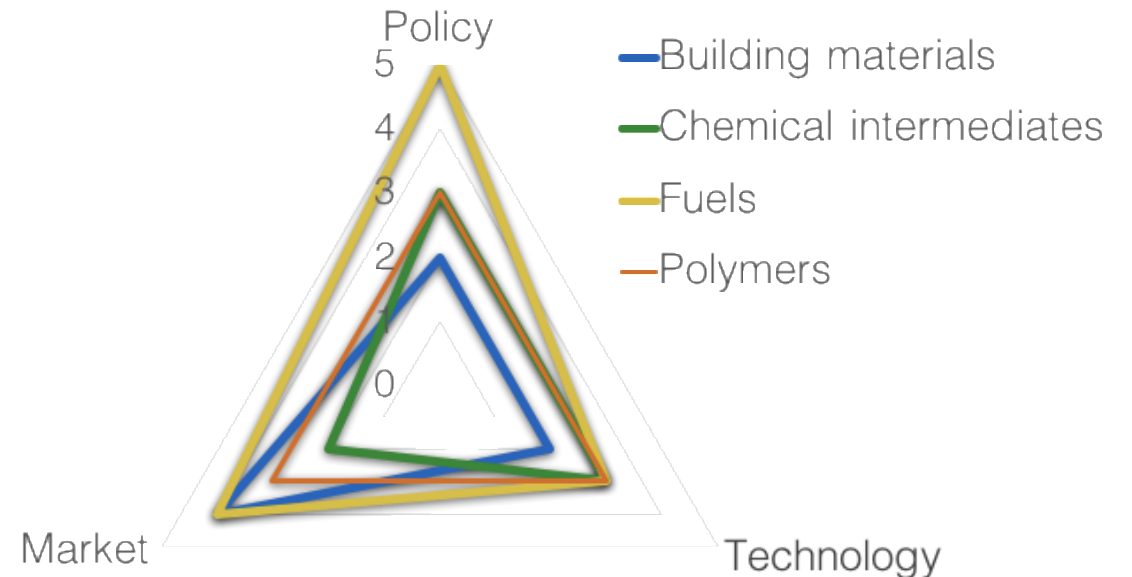
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Graham Institute CNAP Information Panel



The Global CO₂ Initiative: www.globalco2initiative.org

Our mission is to get CO₂ capture and use recognized and implemented as a mainstream climate solution. This requires leading and accelerating the world in building a marketplace to capture and transform CO₂ into commercially sustainable products that harness 4Gt/year of CO₂.



Building the Workforce for a New Industry

- [Innovation for Impact Climate Change](#)
 - Company in residence program, Center for Entrepreneurship
- [Independent studies](#)
- [Summer internships](#)
- [Multi-university projects](#)
- [Global CO₂ Initiative Student Association](#)



Providing guidance for research, policy, and investment

<https://assessccus.globalco2initiative.org/>

Lifecycle assessment and/or techno-economic assessment







- Online tools available at assessccus
- National and international leadership on harmonization of CCUS assessments
- Collaboration on proposals
- Paid services
- Student internships
- Course support



* Funded by US Department of Energy

Guidance for the Carbon Capture and Utilization Ecosystem

- Policymakers briefings
- Faculty, companies, funders connections
- Market potential forecasting
- Proposal coordination and lead
 - Multi-institutional, international

\$0.5 to \$2 trillion/year opportunity		2 to 8 Gigatons of CO ₂ / year	
		Annual Market Opportunity (USD Billions)	Annual CO ₂ Consumption (Million Tons)
	Construction materials Concrete, aggregates	165-550	900-5,000
	Fuels Natural gas replacement, gasoline, diesel fuel, jet fuel	10-250	700-2,100
	Chemicals Solvents, detergents	200-750	135-565
	Engineered materials Carbon fiber, carbon nanotubes, graphene, carbon ceramics	140-400	30-84
	Polymers Plastic foils, containers, furniture, plastic housings, toys	2-25	1-20
	Agriculture & food Fertilizer, protein for human consumption, feed for animals	> 25	> 40

CO₂ is a new ingredient

CO₂ replaces fossil carbon

CO₂ is a new ingredient

60 kg = .06 tons = 1 human 1 MT = 1 million tons = 17 million humans 1 GT = 1000 MT = 2x earth population

Based on <https://hdl.handle.net/2027.42/146529>