Carbon Removal Application

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DAC Supplement

Only fill out this supplement if it applies to you.

Note: these questions are with regards only to air capture: e.g. your air contactors, sorbents or solvents, etc. Separately, there exist Geologic Injection and CO_2 Utilization supplements. We anticipate that most companies filling out this DAC supplement should ALSO fill out one of those supplements to describe their use of the CO_2 stream that's an output of the capture system detailed here.

1) Physical Footprint

a) What is the physical land footprint of your project, and how do you anticipate this will change over the next few years? This should include your entire physical footprint, i.e., how much land is not available for other use because your project exists.

Year	Land Footprint (km²)
2021	
2022	
2023	

b) What is the volumetric footprint of your contactor? (How big is your physical machine compared to how much you're capturing?) and how do you anticipate this will change over the next few years? These numbers should be smaller than (1) above.

Year	Land Footprint (km²)
2021	

2022

2023

2) Capture Materials and Processes

a) What sorbent or solvent are you using?

<50 words

b) What is its absorption capacity? *(grams CO_2 per grams material/cycle)*

c) What is its desorption capacity? *(grams CO_2 per grams material/cycle)*

d) How do you source your sorbent or solvent? Discuss how this sourcing strategy might change as your solutions scales. Note any externalities associated with the sourcing or manufacture of it (hazardous wastes, mining, etc. You should have already included the associated carbon intensities in your LCA in Section 6)

e) How do you cycle your sorbent/solvent?

<100 words

f) What is your proposed source of energy? What is its assumed carbon intensity? How will this change over the duration of your project? (You should have already included the associated carbon intensities in your LCA in Section 6

<100 words

g) Besides energy, what other resources do you require in cycling (if any), e.g water? Where and how are you sourcing these resources, and what happens to them after they pass through your system? (You should have already included the associated carbon intensities in your LCA in Section 6)

<100 words

h) Per (g), how much of these resources do you need per cycle?

<100 words

i) How often do you cycle your sorbent/solvent? *(# cycles/day)*

j) Does your sorbent or solvent degrade over time? Is degradation driven primarily by cycling, environmental conditions, or both?

<100 words

k) In practical operation, how often do you need to replace your sorbent or solvent material, if at all?

<100 words

l) Per (k), what happens to your sorbent/solvent at end-of-life? Please note if it is hazardous or requires some special disposal, and how you ensure end-of-life safety.

<100 words

m) Several direct air technologies are currently being deployed around the world (e.g. Climeworks). Please discuss the merits and advantages of your system in comparison to existing systems.

<200 words