

COP26: Architectural firm envisions skyscrapers that capture CO2

17 November 2021, by Bob Yirka



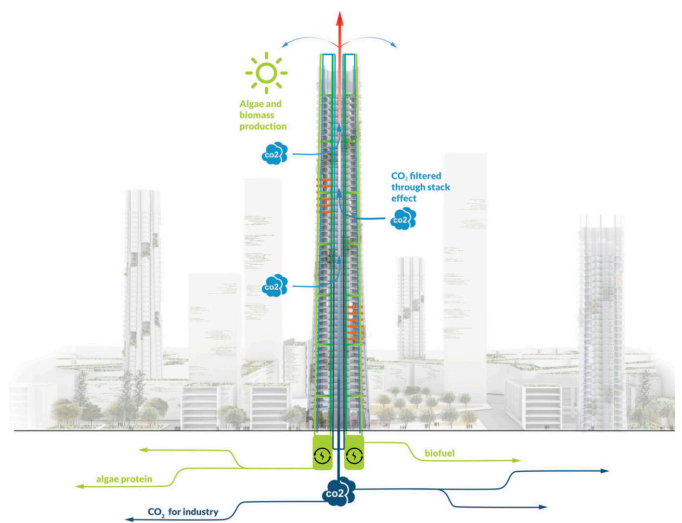
sink over the course of their lifetimes. They also see buildings with areas dedicated to growing plants and algae—both of which could be used to capture carbon and to provide fuel for the building. And they also suggest that the building itself could be designed in a way that captures carbon from the air using what they describe as a "stack effect." In such a [design](#), air would be drawn into a central part of the building, where carbon-extraction devices could be put to work 24 hours a day. They suggest such a building would have a lifetime of approximately 60 years during which it would absorb up to four times as much carbon as was released.

Credit: © SOM | Miysis

Architectural firm Skidmore, Owings & Merrill gave a presentation last week at COP26 suggesting that skyscrapers of the future could remove more carbon dioxide out of the air than they emit. They have come up with a design for such a skyscraper called the Urban Sequoia in homage to the famous redwood trees.

In their [presentation](#), representatives for SOM noted that [urban areas](#) are the primary emitters of [carbon dioxide](#), accounting for approximately a third of all greenhouse gases emitted into the atmosphere. And the problem is only going to grow worse as the population of the world grows. They suggest that one way to reduce emissions is to change the way large buildings are designed—instead of being huge emitters, they claim, the buildings could actually be huge collectors.

The team at SOM envisions skyscrapers incorporating technology that either sequesters [carbon](#) pulled from the air or stores it for sale to manufacturers. They see buildings made of materials that absorb carbon, serving as a carbon



Credit: © SOM

The [team](#) at SOM point out that carbon extracted from a building could be used to create road paving materials, pipes or other parts of urban structures. And they suggest that if all new buildings were

made to collect more carbon than they emit, urban greenhouse gas emissions could be greatly reduced—perhaps by as much as 1.6 billion tons a year.

More information:

[www.som.com/news/at-cop26-som- ... or-absorbing-carbon/](http://www.som.com/news/at-cop26-som-...-or-absorbing-carbon/)

© 2021 Science X Network

APA citation: COP26: Architectural firm envisions skyscrapers that capture CO2 (2021, November 17) retrieved 1 December 2021 from <https://techxplore.com/news/2021-11-cop26-architectural-firm-envisions-skyscrapers.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.