Tackling Embodied and Operational Carbon with Infinite Facade

As the industry responds to the challenge of eliminating operational carbon emissions through design improvements, standards and regulations, embodied carbon becomes even more significant. The question then becomes what strategies can manufacturers, designers and builders deploy when selecting products and materials that reduce embodied carbon emissions? It is critical that both sides of the coin are considered.

The Key to Reducing Emissions Across the Building Lifecycle? A High-Performing Envelope.

As the barrier between the elements, and a significant source of building materials, the envelope has a meaningful impact on GHG emissions.

40%

A well-insulated building envelope can reduce energy loss by up to 40%.1

20%

The envelope accounts for roughly 20% of a building's embodied carbon.²

By maximizing material usage and process efficiencies, Infinite Facade is proven to reduce embodied and operational carbon:



Reduces heating energy by ~30% when compared to typical construction assemblies⁴



Global warming potential (GWP) reduced by over 60% when compared to traditional curtain wall systems⁵

HOW?



Smart Materials Usage

- **High -Value insulation** - typically 6.8 to 7.4 per inch.
- HFO-based spray foam to significantly reduce GWP.
- Uses 40% less cement than traditional architectural precast or tilt-up solutions.



Proactive Design

- Utilizes high-density insulation.
- Aesthetic design features control UV rays.
- Significantly reduces HVAC loads.



Prefabrication

- Early, proactive collaboration reduces rework.
- Reduces pollution, waste, and noise on site.
- **Condenses the construction** schedule.



Ready to reduce embodied and operational carbon on your next project?

Infinite Facade enables you to meet the new challenges in sustainability while keeping the project budget and schedule in check.

To learn more about Infinite Facade, contact us.

infinitefacade.com



Sources:

1. https://www.worldgbc.org/embodied-carbon

- 2. https://www.worldgbc.org/embodied-carbon
- 3. https://aiau.aia.org/courses/embodied-carbon-101-envelope
- 4. https://www.clarkpacific.com/wp-content/uploads/2021/04/Glumac_Clark-Pacific_Infinite-Facade_Envelope-Study.pdf
- 5. https://www.clarkpacific.com/wp-content/uploads/2021/04/Infinite-Facade-LCA-Report-December-2020.pdf

© 2021 Facades Consortium. All rights reserved.