



We envision a future in which glass is the material of choice to enhance spaces where people live, play, learn, work and heal.

November 3, 2022

On behalf of the National Glass Association, we submit this letter in response to the U.S. General Services Administration (GSA) Request for Information (RFI) on the availability of clean construction materials to spur markets for low-carbon products made in the USA.

NGA has more than 1700 member companies from across North America and around the globe, covering the entire supply chain of the glazing and glass building products industry from the primary glass manufacturers, glass and metal fabricators, insulating glass manufacturers, fabricators/manufacturers of completed glass products and systems, spacer and other component suppliers, window and door dealers, to the final retail glass businesses and installers/contract glaziers. Our mission statement is “We envision a future in which glass is the material of choice to enhance spaces where people live, play, learn, work and heal.”

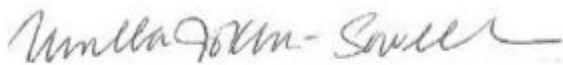
When developing and marketing glazing solutions for buildings, there needs to be a balance between reducing the embodied carbon of the construction materials via “low carbon materials” and reducing the operational carbon of the building. Float glass and window assemblies that use advanced glazing solutions and assemblies (e.g., energy efficient coatings, triple glazing, Vacuum insulating glass units) can help projects achieve high levels of energy performance and significantly reduce operational carbon. Selecting a high-performance glazing solution based on the building’s use and orientation can help reduce the need for air conditioning in the warmer months and heating in the colder months. Natural daylighting can also be transmitted where needed, helping to reduce the need for artificial lighting. Glass manufacturers are working to continuously improve their products and research innovative methods to minimize the glazing solutions’ environmental impact (embodied carbon) throughout the lifecycle.

- Questions 5 and 6 – NGA’s Forming Committee participated in the NGA Flat Glass Industry Wide EPD. [Click here for the report.](#)
- Question 6 - Measuring lower embodied carbon compared to industry averages. NGA asks that GSA considers setting the global warming potential limit for flat glass to: 1716 kg CO2 eq. Using the average will penalize half of domestic products.
- Question 9 – Float glass furnaces are typically rebuilt on a 15-to-18-year cycle. These rebuilds, known as a Cold Tank Repair (CTR), provide manufacturers with the opportunity to install the most recent technologies – if economically and technologically viable – and improve the energy efficiency of the furnace and associated carbon emissions. In between CTRs, manufacturers have limited ability to modify the furnaces as they run continuously 24 hours a day, 365 days a year for 15 to 18 years.

For this reason, a federal standard for float glass and window assemblies should mirror the “Environmentally Preferable Asphalt Standards for all GSA Projects” where it defines float glass selection based on the use of one (1) or more of techniques and not a specific embodied carbon value. Techniques listed could include, but are not limited to, (a) percentage of natural soda ash in batch, (b) improved energy / carbon efficiency of ancillary equipment; or (c) other environmentally preferable features or techniques (please specify). These techniques can help reduce the embodied carbon of float glass in between CTRs. Additionally, as with the asphalt standard, a P100 waiver should be available if contractors are unable to procure a product meeting this requirement.

- GSA should also consider operational carbon in addition to embodied carbon. The use of high performance fenestration products such as low-e glass, high performance insulating glass units and or vacuum insulating glass units will significantly reduce carbon emissions through HVAC and lighting savings in the building. GSA should consider including all high performance low-e glass for window wall, storefront, windows, doors, skylights, light shelves, and sunshades in the definition of low-carbon products as the operational energy and carbon savings over the life of the product greatly outweigh the initial embodied carbon. Said another way, the added embodied carbon of high performance glazing is usually paid back in months, not years, due to the operational carbon savings.

Sincerely,

A handwritten signature in cursive script, appearing to read "Urmilla Sowell".

Urmilla Sowell
NGA Technical and Advocacy Director

Cc: Nicole Harris, NGA President and CEO