

Window Recyclability: Circular Economy

The request:

- Work with NGA and other glass organizations to develop a plan to keep glass out of the landfill. Be aware of the benefits of glass recycling and supportive of local glass recycling programs.
- Support investment in glass recycling infrastructure through the Industrial Demonstrations Program¹ to reduce waste going to landfill and create more jobs and grow business.
- Provide tax incentives for recycling glass as existing buildings are remodeled and/or demolished, beginning with requirements for government buildings. Provide funding to support recycling initiatives, for example to develop GSA design guidelines facilitating recycling.

Glass is infinitely recyclable.

Glass can be infinitely recycled² in the flat glass and bottling operations, so continued reuse further supports our industry, supports a circular economy, and reduces waste and landfill. These benefits drive material choice decisions, for example using glass containers instead of less recyclable materials such as single use plastics.

Glass recycled materials can be used in a wide variety of industries from recycling back into the melt furnace to make new windows, glass containers (jars & bottles), road grade, fiberglass, reflective highway paint, landscaping products, countertops, and coastal restoration materials.

Recycled glass is valuable.

Recycled glass, called “cullet,” helps reduce the energy and emission burdens on glass manufacturing by:

- Reducing the need for raw material mining.
- Reducing trucking and related emissions, as making 1000 tons of glass requires 1000 tons of cullet or about 1200 tons of raw material, called “batch.”
- Reducing furnace emissions – Batch material and firing fuels both off-gas during the glass-making process. Increased cullet usage significantly reduces the emissions from production.³
- Reducing gas usage – Cullet is easier to melt than batch, so lower furnace fuel is required.
- Reducing global warming potential (GWP) of glass, as less energy is needed to make glass when cullet is available.

Recycling glass supports domestic supply – cullet should be considered a viable, reusable, and sustainable domestic material supply chain.

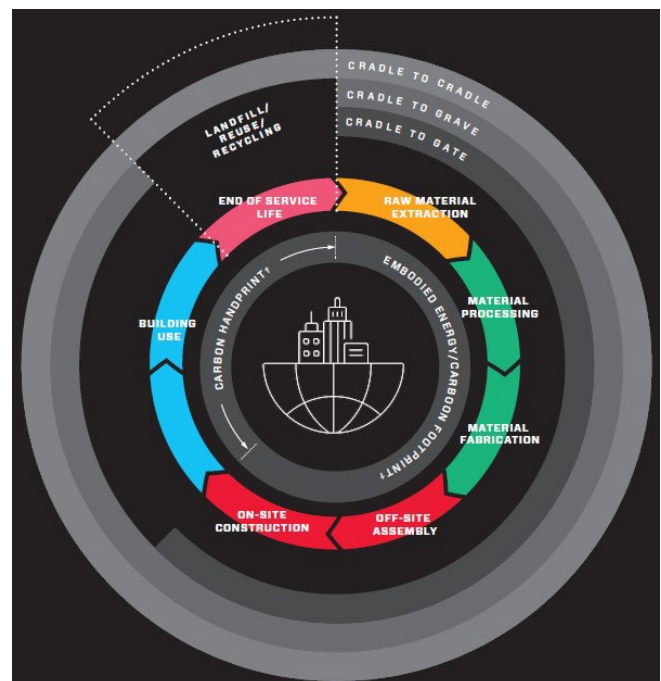
The glass recycling industry creates jobs and tax benefits.

Glass recycling is challenging.

Economics and glass quality requirements present challenges for glass recycling.

- Freight costs typically drive recycling decisions. Long hauls of a heavy product often make recycling a cost challenge.
- Sorting and cleaning of cullet for certain applications can be expensive. In contrast, landfill costs are generally inexpensive in the US.
- Contamination from even trace amounts of certain elements like nickel and aluminum can have dramatic impacts on glass quality.

Higher recycled material content is a key element for future decarbonization efforts for the glass industry.



National Glass Association (NGA) combined with the Glass Association of North America (GANA) in 2018 to create the largest trade association serving our industry. We develop standards, create technical resources, and promote and advocate for glass in the built environment. Learn more at glass.org/about-nga/advocacy. For further information on glass industry recyclability efforts, please feel free to contact NGA Technical Staff at <mailto:technicalsvcs@glass.org>.

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References:

1. <https://www.energy.gov/oced/industrial-demonstrations-program>
2. <https://recyclenation.com/2010/11/facts-glass-recycling/>
3. <https://brandongaille.com/glass-industry-statistics/>



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