



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

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U.S. Department of Energy

RECI_RFI@hq.doe.gov

On behalf of the National Glass Association (NGA), thank you for the opportunity to provide input on **Funding for Cost-effective Implementation of Updated Building Energy Codes.**

NGA has over 1700 member companies from across North America and the globe. Member companies represent the entire supply chain of the glazing and glass building products industry, from primary glass manufacturers, glass and metal fabricators, insulating glass manufacturers, fabricators/manufacturers of completed glass products and systems, spacers, sealants and other component suppliers, window and door dealers, to the final retail glass businesses and installers/contract glaziers.

First, we would like to comment on the partnerships aspect of Section 40511 of the IJJA.

NGA has the infrastructure to convey information from the Department of Energy (DOE) to the glass and glazing industry and would be interested in partnering with the DOE on disseminating information to the industry. NGA has previously participated in programs with NEEA and EPA and can readily participate in similar programs originating from the DOE.

Next, we would like to comment on each of the five desired outcomes of the RFI:

1. Develop the next-generation workforce
 - a. NGA has partnered with the National Center for Construction Education & Research, the Associated Builders & Contractors, the Associated General Contractors of America, and other training providers to create Registered Apprenticeship Programs (RAPs) for glaziers using the NGA Glazier Apprentice Curriculum. NGA has helped to establish RAPs for glaziers in nine states, and Washington, D.C. With an operational infrastructure already in-place, an additional seven state programs are in development, with the ultimate objective to make glazier apprenticeship programs available in all 50 states. We would be happy to leverage these networks to work in coordination with DOE toward mutual workforce development goals.

2. Facilitate energy code updates

- a. We support wider and faster adoption of the most currently published energy codes across *all* states.
- b. Focusing resources on broad adoption across *all* states will likely have a larger overall energy reduction impact than more narrow efforts ‘preaching to the choir’ such as stretch codes that will only be adopted in certain locations that already have good use of energy codes. Both broad adoption and advanced initiatives are valuable, but the primary focus should be broad and consistent adoption of what is currently published.

3. Advance new and innovative policies and tools

- a. NGA strongly supports continued expansion of Building Energy Performance Standards and policies for existing buildings. We encourage an increased focus to include criteria for building envelopes in addition to shorter term fixes such as lighting and mechanical systems. All systems need to be analyzed together to maximize cost effectiveness of improvements to the existing building stock. Our industry has developed many unique solutions for updating the glass and glazing to increase energy efficiency and lower carbon emissions.
- b. The glass and glazing industry needs technical resources to show cost-effectiveness of new codes and code enforcement. We support continued and enhanced funding to the national labs to provide technical assistance in this regard. This is particularly salient in the above support for broader energy code adoption mentioned above.
- c. DOE should continue funding to support the development of EnergyPlus, COMcheck, REScheck, COMFEN, WINDOW, THERM and other software tools that help demonstrate improved energy code compliance and assessment of the impact of glazing on building performance.
- d. Consider holistic evaluation of energy impacts – not just energy savings and cost effectiveness, but also life cycle analysis with balanced evaluation of both embodied energy and operational energy savings, long term carbon emissions mitigation/savings, recycling, and resiliency.
- e. Work with EPA on recycling glass post-building demolition and promoting energy efficiency through retrofit glass initiatives. Calculate carbon savings of recycling using collected data.

4. Increase equity in code-related policies and planning

- a. Implement broad initiative prioritizing domestic vs imported energy efficient solutions. DOE can review the global supply chain and provide incentives for validated domestic supply. Domestic supply creates local manufacturing jobs, uses local skilled labor, and more readily engages and supports underserved communities.

- b. Make broad adoption of energy codes across *all* states the primary focus. This will provide more equity and access to energy efficient buildings everywhere and will have a greater impact than more narrow efforts in areas that are already doing well.

5. Improve energy code compliance

- a. Implement energy code compliance incentives in areas that are not enforcing energy conservation policies.
- b. Focus on addressing energy, carbon, and resiliency in the existing building stock. Emphasize market-ready solutions for building – and specifically envelope - retrofit and working with the national lab network to develop supporting data and narratives that convey such retrofit solutions are financially feasible and carry long-term benefits.
- c. Continue conversation on embodied carbon/energy and operational carbon/energy in a balanced manner, as long-term carbon savings of operational energy are much greater.

As NGA has such a diverse membership, we encourage DOE to also review any detailed comments that have been submitted by individual members. NGA is in strong support of DOE's initiatives to implement updated building energy codes, promote and deploy energy efficient solutions that already exist today, and collectively take meaningful steps towards improving the built environment in the public interest.

Sincerely,



Urmilla Sowell
NGA Technical and Advocacy Director

CC: Nicole Harris, NGA President and CEO