

NGA

NATIONAL GLASS ASSOCIATION with GANA

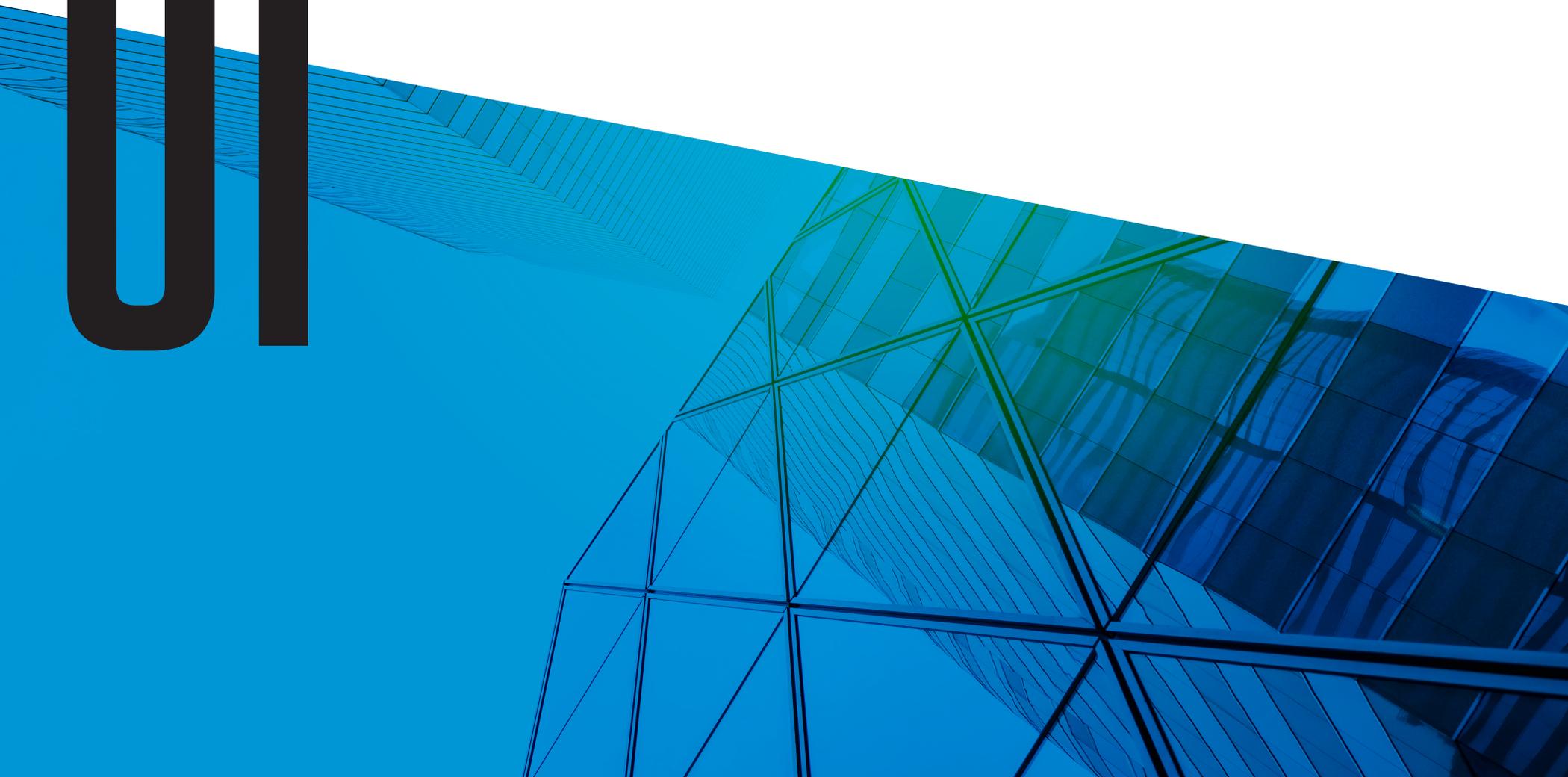
2021 ANNUAL REPORT



INTERNATIONAL YEAR OF
GLASS
2022

Glass Can Save the World™
glass.org/iyog

01 ABOUT THE NGA



FORWARD

Last year, we were running on adrenaline and moving into exhaustion over the pandemic. And still, we pushed forward.

This 2021 Annual Report records the most important products and services we produced. It is also a record of our industry's innovation and resilience.

The National Glass Association championed our vision, leveraging every virtual tool we have. Glass is more important than ever, everywhere people live, play, learn, work and heal. Building owners renovated office space to respond to pandemic protocols and many working from home saw things they wanted to fix, ordering new windows for fresh air and light.

We tried many new approaches to strengthen our glass community. We championed our workforce on the jobsite and in factories during Careers in Construction month with our smile-inducing "Selfies" contest. We challenged the status quo with our Diversity, Equity and Inclusion (DEI) initiative, spearheaded by 2020-2021 NGA Board of Directors Chair, Cathie Saroka, Goldray Glass. We joined other national trade associations to share the business math behind the importance of vaccination, and we strengthened our alliances to share much needed resources to help our member companies and the industry at large.

We also set the foundation blocks for 2022, the **International Year of Glass**. It's our year and it's our time to show the world how glass is adaptable, sustainable, energy-efficient, strong, beautiful, and safe—in a word, *essential*.

I look forward to celebrating the glass and glazing industry with others around the world, and especially here at home. Thank you for being a member and for getting involved.



Nicole Harris
President and CEO
National Glass Association

Core Values

NGA exists to serve and represent our members.



Member Focus

We strive to thoroughly understand our members' business objectives and goals so we can deliver the best member experience.



Inclusion

We represent a diversity of companies with a unified purpose to help grow successful businesses and to champion the benefits of glazing and glass building products.



Innovation

We pursue every avenue to fulfill our vision of glass as the material of choice to enhance spaces where people live, play, learn, work and heal.

Core Focus

NGA serves the entire glazing and glass building products supply chain.

Our primary member services

- Advocate on behalf of our members and the industry.
- Provide our members with unparalleled technical expertise.
- Help educate and train our industry's current and future workforce.
- Provide a place to learn and network at industry-focused conferences and events.
- Share best practices, trends and information through our magazines, websites and digital media platforms.

Core Goals

Educate

Drive excellence, safety and results through education and training.

Promote

Elevate the image of glass as a safe, healthy, sustainable and inspiring building product and advance the industry as a viable, thriving and exciting career path.

Advocate

Vigorously promote and defend the glass industry.

Grow

Build NGA's membership to increase influence, impact and results.

What Sets NGA Apart

NGA is focused.

We are the only trade association focused exclusively on glass, glazing and glass building products issues and needs.

NGA is comprehensive.

We serve and represent the entire glass,

glazing and glass building products supply chain—from primary glass manufacturers to glass fabricators to commercial and residential glass installing companies.

NGA is unique.

We have a unique set of

products and services to meet member and industry needs at every level of the glass, glazing and glass building products supply chain.

The NGA Foundation helps us achieve these goals. The NGA Foundation is a 501(c)3 nonprofit organization where tax-deductible donations can be made for training the industry, advocating on behalf of the industry, and promoting the industry by educating consumers about the many ways glazing and glass building products contributes to a safe, healthy, sustainable, and inspiring built environment.

[The NGA Foundation is listed on GuideStar](#)

02

EDUCATE

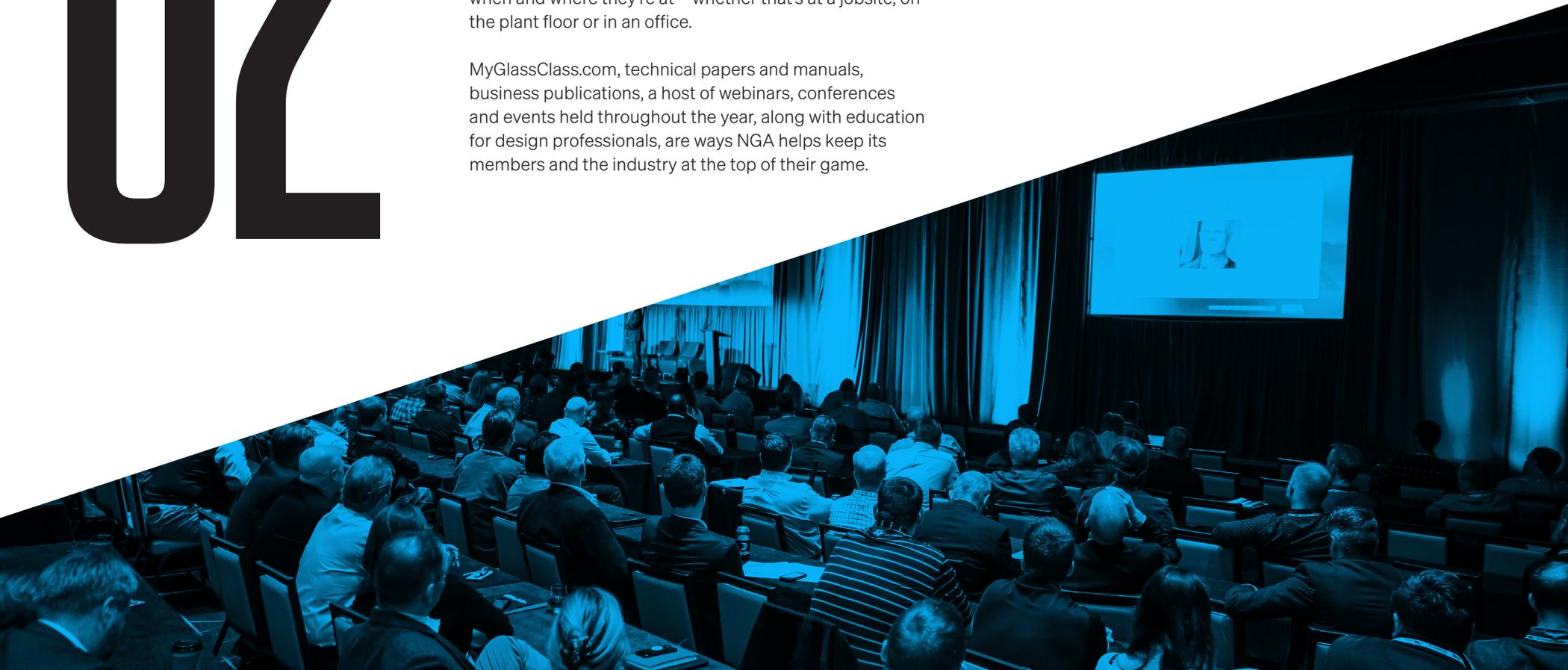
ed-u-cate

verb

to drive excellence, safety and results through education and training.

NGA's resources for education and training take several forms to meet the needs of its members and stakeholders when and where they're at – whether that's at a jobsite, on the plant floor or in an office.

MyGlassClass.com, technical papers and manuals, business publications, a host of webinars, conferences and events held throughout the year, along with education for design professionals, are ways NGA helps keep its members and the industry at the top of their game.



MYglassclass.com

An initiative of the **NGA**



MyGlassClass.com remains the leading choice among installers, fabricators, and glass and glazing companies for training, with over 100 online courses in two languages. More than 3,600 industry professionals have been trained to date using the MyGlassClass.com online platform.

Milestones

May 2021: Thanks to generous grants from the Friese Foundation and other donors, 27 MyGlassClass.com online training courses were made available in Spanish.

November 2021: Through collaboration with UL PureSafety On Demand, MyGlassClass.com increased its Spanish language course catalog to include more than 60 courses.

“Learning the glass and glazing trade when materials

are not in your first language is challenging,” says NGA President & CEO Nicole Harris. “We believe providing these Spanish-translated courses will help industry companies with their training efforts and in turn, increase the skilled labor pool for the entire industry. This initiative fits with NGA’s focus to promote diversity, equity and inclusion in the glass and glazing industry and would not be possible without the Friese Foundation’s generous support.”

NGA Glazier Apprentice Curriculum

NGA now offers the Glazier Apprentice Curriculum for organizations and companies that want to establish a glazier apprenticeship program approved by the U.S. Department of Labor. Students who complete the curriculum earn a jointly endorsed NGA/ NCCER credential indicating

a journeyman-level minimum competency reached through knowledge and performance.

Milestones

May 2021: NGA and NCCER, the National Center for Construction Education and Research, signed an agreement for NCCER to endorse and promote the NGA Glazier Apprentice Curriculum.

Stats

Number of state apprenticeship programs using the NGA Glazier Apprentice Curriculum: **10**

Number of classroom learning hours: **430+**

Snapshot

115

Number of courses

3,600+

Users to date

15,000

Courses completed

600+

Number of new students in 2021

Technical and Business Publications

When it comes to learning about glass, NGA is your authority and resource. We offer in-depth Glass Technical Papers (GTPs); easy-to-read Glass Information Bulletins (GIB); business manuals; and papers written and developed by industry experts for fabricators, glaziers, suppliers and manufacturers, and others involved in glazing and glass building products. Many technical resources are available at no cost to members, and members save up to 50% on all manuals, guides and books. Learn more in the [NGA Store](#).

NGA Design Guide: New Technical Resources Available Now!

In 2021, NGA added a new technical product category to its publication library, the Design Guide, filling the gap between Glass Technical Paper and Manual.

The new Design Guide is intended to fill a targeted need for more in-depth guidance and recommendations related to design and installation best practices for the glazing and glass products industry. NGA volunteer task group members develop Design Guides, which follow the consensus process with balloting procedures matching existing GTPs.

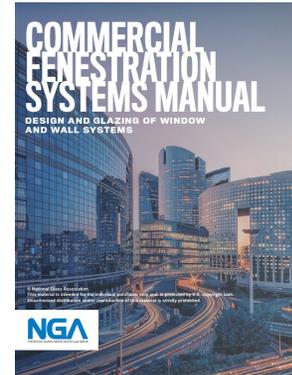
Milestones

In 2021, NGA released 3 new and 5 updated Glass Technical Papers, 2 new Design Guides, and 1 new and 1 updated Manual.

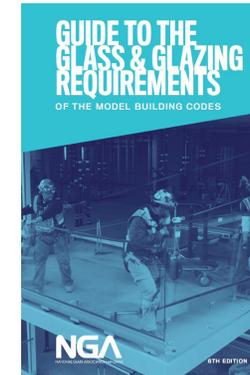
2021: NGA published these new or updated GTPs:

- New School Security Glazing GTP
- New Introduction to Hybrid VIG Fabrication GTP
- New Flat Glass Environmental Transparency Documents GTP

- Updated The Reusability and Recyclability of Mirror Products GTP
- Updated Installation Techniques Designed to Prolong the Life of Flat Glass Mirrors GTP
- Updated Recyclability of Architectural Glass Products GTP
- Updated Considerations When Installing Interior-Mounted Back-Painted Glass GTP
- Updated Design Considerations for Laminated Glazing Applications GTP



May 2021: Thanks to the dedication of task group members, NGA published a new Commercial Fenestration Systems Manual.



June 2021: NGA published an updated Guide to Glazing Requirements of the Model Building Code reflecting the latest building code updates.



October 2021: NGA released the first Design Guide, Best Practices for Bird-Friendly Glazing Design through the coordination of task group volunteers and industry experts.



November 2021: NGA released the Frameless Shower Enclosures Design Guide thanks to our task group volunteers.

NGA Store
Snapshot

89

GTPs

TWO

New Design Guides

3,454

Downloads/purchases from the NGA Store in 2021

FOURTEEN

Manuals/Books/Guides

Webinars

Thirsty Thursday

Quench your thirst for knowledge with NGA's Thirsty Thursday webinar series. The 30-minute sessions are held the third Thursday of most months and cover a wide range of industry trends and technical issues.



Milestones

2021: Recent topics included: Code Regulations for Existing Buildings, Understanding the Tech Tables in NGA's Engineering Standards Manual and Heavy Glass Door Design Guide, Understanding California AB262, Glass Options for a Healthy Built Environment, How to Make Informed Embodied Carbon Decisions in Glass and Glazing, Standards for Anisotropy, Standards Impacting Laminated Glass

2021: Thirsty Thursday webinars draw up to 300 attendees each month.

Conferences & Events

Held throughout the year, **NGA's conferences** and **GlassBuild America: The Glass, Window & Door Expo** provide our member community—and the glass and fenestration industry at large—opportunities to come together for networking, education, committee meetings, and more.

NGA Glass Conferences

Held twice annually, these events draw like-minded business leaders to influence and advance the industry through our Forming, Fabricating, and Advocacy Committees activities.

Milestone

September 2021: NGA Glass Conference is back in person in conjunction with GlassBuild America.

[Recap of NGA Glass Conference: February](#)

[Recap of NGA Glass Conference: September](#)



2022 NGA Conferences & Events (subject to change)

NGA Glass Conference: Long Beach

Jan. 24-26, 2022 | Long Beach, Calif.

Building Envelope Contractors (BEC) Conference

Mar. 27-29, 2022 | Nashville, Tenn.

GPAD (Glass Processing Automation Days)

Mar. 29-31, 2022 | Nashville, Tenn.

NGA Glass Conference: Chicago

Jul. 18-21 | Northbrook, Ill.

Glazing Executives Forum

Oct. 18, 2022 | Las Vegas

GlassBuild America: The Glass, Window & Door Expo

Oct. 18-20, 2022 | Las Vegas

[More information on NGA's Conferences](#)

[More information on GlassBuild America](#)

Building Envelope Contractors (BEC) Conference



The NGA released BEC Presents in 2021, in light of cancelling the in-person event due to pandemic implications. BEC Presents was formatted akin to a television mini-series, dropping five on-demand episodes covering a range of topics important to glass and glazing companies. The series garnered much attention in its first week, with engaged viewers asking for more information from our featured experts on specification requests, testing procedures, and use of demountable products in commercial real estate.

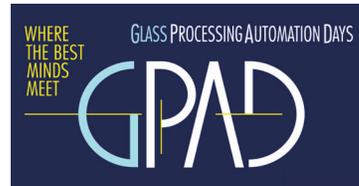
Milestone

March 2021: The episode featuring a conversation among market segment leaders on the state of the glass, metal and contract glazing industry is the most-watched episode of BEC Presents.

[Promotional trailer for BEC Presents](#)

[Guest blog recap of the series](#)

GPAD (Glass Processing Automation Days)



GPAD—Glass Processing Automation Days—provides a unique two-day opportunity to investigate new and innovative technologies in the glass fabrication industry and to discover the additional benefits of automation and integration. GPAD was founded in 2013 by FeneTech Inc.; NGA took over as organizer in 2019, with FeneTech recognized as a “Founding Partner.” In anticipation of hosting GPAD in March 2022, regular attendees helped promote the event through a targeted blog series.

[GPAD blog: Futureproofing Glass Fabrication](#)

[GPAD blog: How GPAD is Live Research for Business Improvement](#)

[GPAD blog: The Digital Factory](#)

[GPAD blog: Top Takeaways, From a GPAD First-Timer](#)

[GPAD blog: Bringing It All Together](#)

Glazing Executives Forum



This one-day conference was held on Mon., Sept. 13, in conjunction with Glass-Build America: The Glass, Window & Door Expo in Atlanta, GA. It brought leaders of contract glazing companies together to learn and share best business practices unique to installing companies. A meeting of the NGA’s Installing Committee was also held.

Milestone

September 2021: Economist Connor Lokar returned to present an industry economic forecast, which is a highlight of the day-long event.

[Recap of 2021 Glazing Executives Forum](#)

GlassBuild America: The Glass, Window & Door Expo



GlassBuild America is the largest annual trade show for the glass and fenestration industries in the Americas. GlassBuild 2021 was back in person for the first time since 2019.

Milestones

September 2021: GlassBuild America was back in person and exceeded attendance expectations.

September 2021: NGA launched the Industry Pavilion and GlassBuildTV. NGA brought together leading associations, organizations and stakeholders spanning all avenues of the glass, fenestration and construction industries in the Industry Pavilion at GlassBuild America in 2021. NGA curated and created more than three hours of educational programming to display on the new GlassBuildTV platform.

[Recap of GlassBuild America 2021](#)



GlassBuild America Snapshot

ATLANTA, GA

Location

35

Countries represented

114,874

Exhibit floor size (net sq ft)

5,100

Attendees

Design Professionals

AIA-approved Presentations

NGA is an approved AIA Provider of CES credits. Thanks to the involvement of our volunteer members, NGA has several approved presentations for live (in-person or online) delivery as part of its resource library. NGA members may use these presentations when connecting with the design community.

AIA Continuing Education Provider

Now is the time to stay in front of your stakeholders. Become an approved presenter and use NGA's AIA-accredited presentations now to host live, virtual meetings.

Milestones

2021: A new decorative AIA presentation was created: Designing with Glass: Privacy and Translucency.

2021: Key Advances in Fire-Rated Glazing was updated to reflect new technology.

Glass & Glazing Design Academy

NGA hosted its Glass & Glazing Design Academy with Architectural Record for a third year. NGA's accredited AIA presentations are available as on-demand, multimedia webinars, as well as editorial articles. Architects and design professionals can access all materials through [NGA's Academy](#).



Milestone

2021: Top courses to date are:

- Understanding How Glazing Can Impact Safety and Fire Protection
- Beyond Energy: How Glass in Architecture Contributes to Occupant Well-Being and Comfort
- Key Advances in Fire-Rated Glazing
- The Many Benefits of Laminated Glass
- Critical Reasons to Specify Insulating Glass
- The Value-Added Performance of Coated Glass

Glass & Glazing Design Academy Snapshot

3,750+

Users to date:

10

Active courses

ELEVEN

Badge earners

03

PROMOTE

pro-mote

verb

Elevate the image of glass as a safe, healthy, sustainable and inspiring building product and advance the industry as a viable, thriving and exciting career path.

NGA maintains several avenues of engagement with our members, stakeholders and the industry. These include magazines, newsletters and websites.



Glass Magazine

Glass Magazine gives you access to the entire industry supply chain: primary glass manufacturers, glass fabricators, glazing contractors, full-service glass companies, and suppliers.

Our editorial team is dedicated to providing unbiased, relevant content that helps companies build

more profitable businesses. Trust the respected source of industry information to spread your sales message.

Glass Magazine is the glass and glazing authority.

Snapshot

826 **EIGHT**

Print pages

Issues per year

FIFTY

Editions of Glass Magazine Weekly

450,000

pageviews on GlassMagazine.com

OVER 500

Glass industry news items

Key Reports

Glass Magazine offers key glass industry reports and trend information in every issue. Highlights from 2021:

January/February

The World of Glass

Updates on float glass production in North America and around the world, also available at WorldofGlassMap.com

2021 Forecast

A deep dive into macro-economic and construction spending data to help glass companies navigate the uncertainty ahead

March

2021 Top Glass Fabricators Report

Fabricators push through unpredictable pandemic market with new manufacturing challenges

5 Decorative Glass Trends to Watch

How to keep up with demand for larger sizes, more vibrant colors, bird-friendly products and more

April

The Architect's Guide to All that Glass Can Do

A Transformative Material: High performance and as strong as steel

May/June

Top 50 Glaziers

The list, sales, market and investment, challenges, industry benchmarks and more

Protect with Glass

Security glazing in schools

July

Annual Sourcebook

The industry's most complete directory and reference

August

The Complete GlassBuild Preview

With the in-depth exhibitor product showcase

September/October

Glass Magazine Awards

8 impressive award-winning projects and 6 potentially game-changing products

The Digital Factory

Guide to automation and integration on the glass factory floor

November/December

Top Metal Companies

Leading companies weather the next normal supply chain and labor hurdles

Glass Industry Trend Watch

Top trends from GlassBuild America, plus next-level lifting solutions





Window + Door

Covering the entire residential fenestration industry, from source to sale, Window + Door is produced by the National Glass Association and is the official publication of GlassBuild America: The Glass, Window & Door Expo.

Window + Door is dedicated to providing the entire fenestration industry with unbiased, relevant content that helps companies build more profitable businesses.

Key Reports

[The Industry Pulse](#)

[Top Manufacturers Report](#)

Trendhunter Features: [Extrusions](#) and [Hardware](#)

Case Studies: [Patio Doors](#) and [Replacement Windows](#)

[Annual Buying Guide](#)

[Window + Door Awards](#)

Snapshot

448 SIX

Print pages

Issues per year

FORTY NINE

Editions of Window+DoorWeekly

NEARLY 350K

pageviews on WindowandDoor.com

OVER 480

residential fenestration industry news items

Advocacy & Technical Updates

Sent to members monthly, this update provides timely information specifically on NGA's advocacy and technical activities, including opportunities to get involved in committees and task groups.

Most-Clicked Articles:

- [New Resource: School Security Glazing](#)
- [Bird-Friendly Glazing](#)
- [2022: The International Year of Glass](#)
- [Registration Now Open for NGA Glass Conference: Long Beach](#)
- [NGA Design Guide: Two New Technical Resources Available Now](#)
- [NGA Glass Conference: July](#)
- [December Thirsty Thursday Webinar](#)
- [DOE Building Efficiency](#)
- [Highlights from NGA Glass Conference: September](#)



Member updates

NGA members receive updates twice per month to help keep them better informed on their member benefits and NGA's activities at a glance. A highlight of each edition is the NGA Member Spotlight, proudly highlighting our members to introduce them to fellow members and the industry.

[Year-end 2021 NGA Member Spotlight Gallery](#)

Creating Community

The NGA member community is 1,700 companies strong. We are contract glaziers. We are full-service glass companies. We are fabricators, manufacturers and suppliers. NGA takes pride in building community for our members—within our industry and with related stakeholders.

Industry Alliances

“Collaboration is in NGA’s DNA,” says Nicole Harris, NGA president and CEO. In 2021, the association collaborated with dozens of organizations to elevate and promote the industry, advocate for glass and fenestration in the regulatory and code environment, and share educational resources, maximizing their reach across the industry.

Milestones

March 2021: NGA Partners with NAWIC to Support Women in Construction. NGA continued its support of the National Association of Women in Construction and its activities during 2021. A key initiative for the NAWIC is Women in Construction Week, held in March, highlighting women as a viable component of the construction industry.

“NGA is pleased to support NAWIC’s initiative ‘Women in Construction Week’

to champion and celebrate women in the glass industry,” says Nicole Harris, NGA president & CEO. “It’s just the start of our collaboration with NAWIC to accelerate the success of women in construction.”

September 2021: NGA Launches the Industry Pavilion and GlassBuildTV. NGA brought together leading associations, organizations and stakeholders spanning all avenues of the glass, fenestration and construction industries in the Industry Pavilion at GlassBuild America in 2021. NGA curated and created more than three hours of educational programming to display on the new GlassBuildTV platform.

Collaborators included:

- American Subcontractors Association (ASA)
- Architectural Record
- Fenestration Canada
- Fenestration Glazing Industry Alliance (FGIA)
- Glass Performance Days (GPD)
- glasstec
- Glazing Industry Secretariat Committee (GISC) / ASC Z97 Committee
- International Year of Glass 2022
- National Association of Women in Construction (NAWIC)
- National Fenestration Ratings Council (NFRC)

- North American Contractor Certification (NACC)
- Safety Glazing Certification Council
- Window & Door Manufacturers Association (WDMA)
- NGA-affiliated State and Regional Glass Associations
 - Colorado Glazing Contractors Association
 - Houston Area Glass Association
 - Mid-Atlantic Glass Association
 - Texas Glass Association
 - Utah Glass Association
 - Washington Glass Association

October 2021: World Millwork Alliance to Co-locate with GlassBuild America.

NGA collaborated with the World Millwork Alliance to bring the WMA Annual Convention & Tradeshow to co-locate with GlassBuild America: The Glass, Window & Door Expo, in 2022. The co-located events will take place at the Las Vegas Convention Center in Las Vegas, October 18-20, 2022. The WMA Annual Convention & Tradeshow brings together the global millwork industry, including millwork distributors, manufacturers of products and services, pro dealers, sales representatives, and architects, builders, contractors and remodelers. Held annually, the event will

hold its 57th edition in 2022.

Diversity, Equity and Inclusion

A strong future for the glass and glazing industry depends on building and strengthening our workforce. Diversity, equity and inclusion (DEI)—the antithesis



to discrimination in all forms—is at the forefront of that effort for NGA.

“It is up to all of us for the future health of our industry to continue to promote diversity and equity in all its forms.” — Cathie Saroka, president, Goldray Glass and 2020-21 NGA Board Chair

Milestones

- March 2021: NGA Celebrates Women in Construction and Manufacturing**
- April 2021: NGA Creates Online Toolkit for DEI in the Workplace - Diversity, Equity & Inclusion Resources**
- June 2021: NGA Recognizes Juneteenth**

Supporting the Industry. Raising Awareness.

In 2021, NGA leveraged its various platforms—magazines, social media, newsletters and websites—to put the spotlight on the people and products that define the glass industry as a vital part of the economy and a viable career path. Specifically on six commemorative days and months throughout the year, we promoted the industry’s greatest attributes and offered resources, developed by NGA staff and committees, to continue amplifying glass and the glass industry.

Milestones

March 7-13, 2021: [NGA Celebrates Women in Construction Week](#)

April 4-10, 2021: [NGA Supports Window Safety Week](#)

May 2-8, 2021: [NGA Supports Construction Safety Week](#)

Sept. 3, 2021: [NGA Promotes National Skyscraper Day \(LinkedIn Post\)](#)

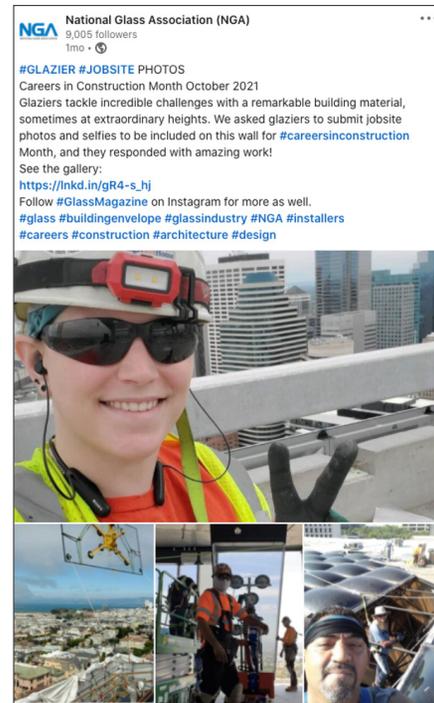
Oct. 1, 2021: [NGA Recognizes MFG Day on Friday, October 1](#)

October 1-31, 2021: [NGA Encourages Support for Careers in Construction Month](#)

Related articles

[The State of Women in Construction](#)

[Why Glazing? Two Glaziers Give Their Reasons](#)



LinkedIn post for Careers in Construction Month

Supporting the industry snapshot

SEVENTEEN

Total posts on social media

22,861

Views on social media

04

ADVOCATE

ad-vo-cate

verb

To vigorously defend and promote the glass industry.

NGA's advocacy and technical initiatives respond to the relentless, ever-changing challenges to our industry. NGA is the glass and glazing authority; we are a resource for our members and the industry at large. We thank our volunteer members, industry partners and expert consultants who work tirelessly to ensure glass and glazing is at the forefront of all discussions impacting building regulations and innovation in construction.



NGA: Glass and Glazing Authority

From the U.S. government to industry code bodies, organizations look to NGA to be the definitive reference when it comes to the architectural glass industry.

GSA Facilities Standard References NGA Design Guide

The U.S. General Services Administration (GSA) Facilities Standards for the Public Buildings Service (P-100) was updated this year. NGA's new Best Practices for Bird-Friendly Design Guide was noted as a point of reference for all US GSA projects considering bird-friendly design.

Influencing Legislation: Advocacy One-Pagers

NGA provides one-pagers on important glass industry issues—like bird-friendly glazing and flat glass global warming potential—in a quick-reference format for the benefit of easy understanding for stakeholders and legislators.

NGA Task Group Develops ASTM Active Shooter Standard

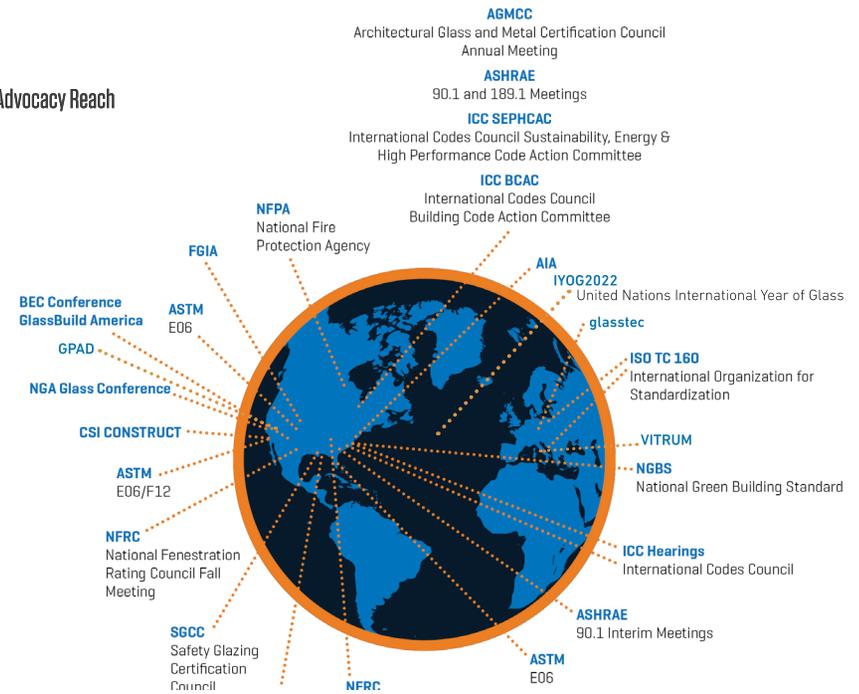
NGA's task group on School and Facility Security developed a new industry consensus repeatable mechanical test method for forced entry of buildings, weakening the glass by shooting in a prescribed pattern, then simulating an attack with a mechanical impactor. This new test method is currently at ballot at ASTM. The task group will develop educational documents and training platforms such as brochures and presentations on how and when to utilize security glazing balanced with risk, threat and vulnerability while examining the incorporation of the glazing into new or existing systems.

Model Building Codes and Glazing Industry Standards

NGA is actively involved with standards and codes bodies including the International Codes Council, ASTM International and ASHRAE, among others, to promote and defend the use of glass in the built environment. NGA's Urmilla

Sowell, Tom Culp, Thom Zaremba and Nick Resetar hold leadership positions and represent the glass and glazing industry in the International Code Council (ICC), ASHRAE 90.1, ISO International Standards Organization PAWS: Partnership for Advanced Window Solutions, ASTM and ASC Z97.

NGA's Advocacy Reach



Milestones

January 2021: The International Code Council (ICC) Group A proposal submittal process began in January. NGA Code Consultants Thom Zaremba, Tom Culp and Nick Resetar reviewed and made recommendations on all the glass and glazing proposals representing the Glazing Industry Code Committee (GICC) and NGA. GICC submitted a proposal for natural daylighting in schools. Despite strong evidence that daylighting and views enhance the learning environment, the proposal did not pass, facing opposition from the lighting industry. NGA Code Consultants are now focusing on the ICC Group B cycle, which has already begun.

January/February 2021: AT Technical and Advocacy staff held ASTM Glass

Strength meetings. Topics discussed were updates to ASTM E1300 – Standard Practice for Determining Load Resistance of Glass in Buildings which is going through its five-year review before publication.

March 2021: NGA's Advocacy Team supported revisions to the International Code Council (ICC) development processes for the International Energy Conservation Code (IECC). The ICC Board approved switching the development of the IECC from the normal code hearing process to a consensus standards process, using a balanced consensus committee and public review process similar to what is used by ASHRAE, ASTM, ANSI, ISO, and other organizations.

April 2021: ASHRAE 90.1 SSPC 90.1 Energy Standard

for Buildings Except Low-Rise Residential Buildings held their Spring Interim meetings where the NGA Advocacy Technical team represented the glass and glazing industry. The meetings included discussion of a simplified method for the design of buildings and building envelope materials.

April 2021: ISO International Standards Organization Technical Committee 160: Glass in Buildings held a meeting of the Chairman Advisory Group (CAG) in April. The CAG discussed updates to ISO TC 160 standards for Glass in Buildings including BIPV, dynamic glazing and glass strength.

April 2021: Urmilla Sowell, NGA Technical and Advocacy Director, participated in ASTM Committee E06 on

Performance of Buildings and Committee F12 on Security Systems and Equipment. Work group topics included Design of Glass Railings, Guards and Balustrades, Sealed Insulated Glass, Security Glazing, Glass Floors & Stairs, and Impact Resistance. Several security standards and glass strength standards were balloted this summer.

June 2021: The ASC Z97 Committee, administered by NGA, is the group of member companies maintaining and leading the development of the ANSI Z97.1 voluntary standard for safety glazing materials used in buildings. The Committee re-approved the ANSI Z97.1-2015 (R2020) version of the standard and will be preparing to initiate its five-year review process soon in anticipation of publishing

the 2025 version.

August 2021: The California Energy Commission approved a resolution adopting the 2022 Energy Code, commonly known as Title 24. The 2022 Energy Code will go into effect on January 1, 2023, following expected approval by the California Building Standards Commission. NGA's advocacy team provided feedback on proposed changes to the teams developing the Title 24 update over the last two years. Overall, the new version of Title 24 will make significant advancement towards the state's energy efficiency and climate change goals while also meeting their cost effectiveness requirements.

September 2021: The PAWS: Partnership for Advanced Window Solutions is a new initiative

bringing together the DOE, NEEA, LBNL, manufacturers, utilities and efficiency advocates to increase demand for high-performance windows. Initially the program targets residential R5 windows but plans to expand to promote advanced commercial framing and glazing. The program was introduced at NGA Glass Conference: September by Stephen Selkowitz of LBNL. NGA Code Consultant Tom Culp and several NGA member companies are involved.

October 2021: ASTM Committee C14 updated and published several new standards for the glass industry, including a new test method for anisotropy (visual distortion) in glass.



05

GROW

grow

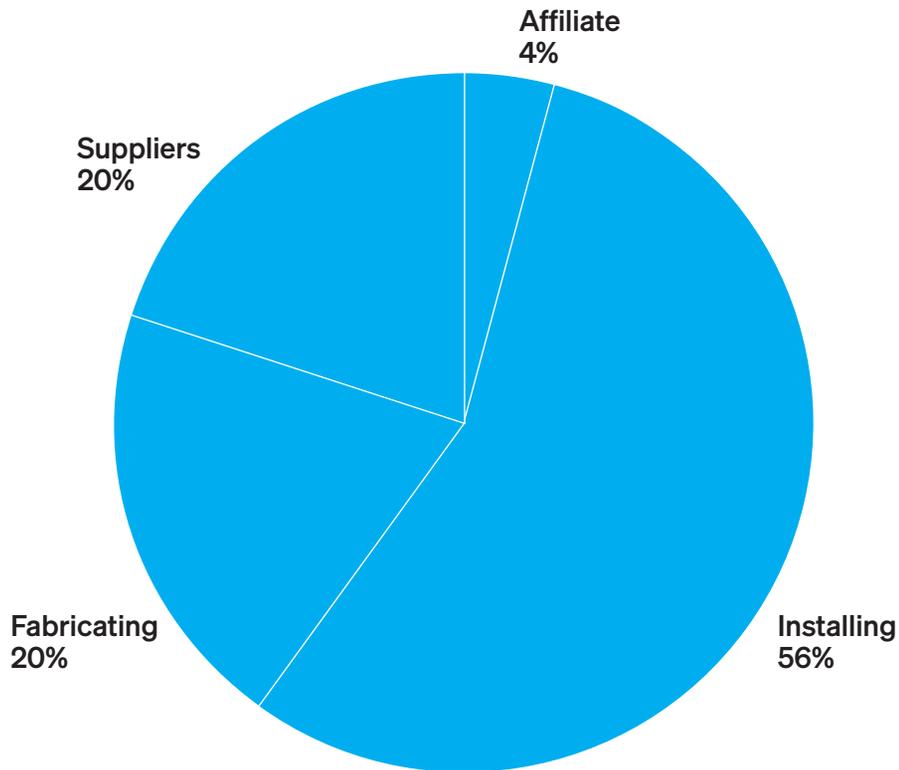
verb

Build NGA's membership to increase influence, impact and results.

The NGA member community is 1,700 companies strong and represents all aspects of the glazing and glass building products industry. We take pride in being a resource to our members to help grow successful businesses.

NGA Membership Snapshot

By Company Type



18

By Location

NGA members span across the U.S. & Canada – including members in Alaska, Hawaii, Puerto Rico and Guam.

NGA has members in **18 countries** across the globe.

38

Years in Business

The companies featured in NGA's Members Spotlight in 2021 have been in business an average of **38 years**.

10.3

Economic Impact

Combined, NGA member companies represent more than **\$10.3 billion** in annual sales in the glazing and glass building products industry.

Members-Only Activities and Resources

NGA-affiliated Regional Glass Associations

NGA supports regional glass associations through engagement in events, promotion and sponsorship of activities, and by providing benefits to their members.

Milestones

May 2021: The Washington Glass Association (WGA) hosted NGA President & CEO Nicole Harris as the featured speaker at their May 2021 meeting, providing NGA's perspective on the state of the industry and a look forward.

November 2021: NGA President & CEO Nicole Harris presented a "State of the Industry" to members of the Houston Area Glass

Association (HAGA) during their November lunch meeting.

December 2021: NGA Board Chair Guy Selinske, American Glass & Mirror, Prior Lake, Minn. and NGA Director of Content and Education & Training Jenni Chase presented information on NGA's training opportunities at Minnesota Glass Association's (MGA) December meeting.

Members-Only Resources Webpage

NGA members now have exclusive access to a variety of resources, including codes and standards information, available on the Members-Only Resources webpage.

Milestones

February 2021: NGA launched Members-Only Resources webpage including access to safety bulletins, webinars and materials from NGA's alliance with the American Subcontractors Association (ASA).

February 2021: NGA launched the Codes & Standards Help Center giving NGA members online access to answers on tough technical codes and standards questions. The NGA Codes & Standards Help Center has detailed answers to questions relating to safety glazing, energy, glass inspection, bird-friendly glazing and fire-rated glazing. Members can also submit a new question.

Installing Company Peer Group

Through its Installing Company Peer Group, NGA provides an informal forum for leaders from installing company members to network and share ideas.

Milestones

December 2021: NGA hosted a networking hour for the Installing Company Peer Group to discuss challenges, ideas and successes related to employee recruitment and workforce development practices. Participants included operations managers, business development managers, presidents and owners.

NGA-affiliated Associations

- [Colorado Glazing Contractors Association](#)
- [Houston Area Glass Association](#)
- [Mid-Atlantic Glass Association](#)
- [TGA North Texas Division](#)
- [Connecticut Glass Dealers Association](#)
- [Massachusetts Glass Dealers Association](#)
- [Minnesota Glass Association](#)
- [Utah Glass Association](#)
- [Texas Glass Association](#)
- [Washington Glass Association](#)

Volunteers

NGA enjoys celebrating the impact of volunteer service and the power of volunteers to come together to tackle tough challenges and build a stronger, more resilient community. The past year has been a striking example of the wide-reaching benefit that stems from unification in support of our partners and peers. We value our members who lend their time, talent, voice and support to the initiatives of the association.



Committee & Task Groups

NGA volunteers contributed their time and resources collaborating to create technical content for the industry. On average...

31 task group meetings over the course of the year

257 total volunteer hours in 2021

Awards

NGA gave two membership awards in 2021 in honor of service, volunteerism and the betterment of the industry.



C. Gregory Carney Award: Chris Barry

The C. Gregory Carney Award is the highest honor the Association has to give. The award was established in 2014 after the passing of Greg Carney, who served as Glass Association of North America (GANA) Technical Director for over two decades. The award is for an individual involved in and advocating for the industry, demonstrating the

Association's mission and values within the industry: doing what is right for the industry, not what is one-sided or popular.



Volunteer of the Year 2021: Michael Saroka, Goldray Glass

The NGA Volunteer of the Year award nominee must be an NGA member and have made significant contributions to the Association or profession in the past year.

CONCLUSION

Thank You Industry Leaders

Everything NGA accomplished in 2021 comes with support from our industry leaders. We appreciate the generosity in time and expertise given by our board of directors, who represent the entire glazing and glass building products supply chain, and the volunteers who make up NGA's committees and task groups.

Meet NGA's 2021-2022 industry leaders:

NGA Board of Directors

NGA Committees

Looking Ahead

The General Assembly of the United Nations has declared 2022 as the International Year of Glass! The year will celebrate the essential role glass has in society, serving as a life-changing material in architecture, the environment, healthcare, science, technology and more. NGA supported the worldwide effort to achieve this designation and is leading the efforts for architectural glass activities and promotion in the United States.

Throughout the year, NGA will promote the solutions glass provides to the built environment and spotlight the glass industry as an exciting and rewarding career to the next generation of workers. Stay tuned at glass.org/iyog to learn about special International Year of Glass activities and how you can get involved.

