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**THE GLASS ART SOCIETY**

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## Panel: COMMUNITY GLASS RESOURCES

Moderator: Eddie Bernard

Panelists: Chuck Lopez, Chris Clarke, and Scott Graham

Sponsored by Steve Funk

This panel is part of an ongoing GAS conference *Environmentally Green Panel* series. Previous titles have been "Fueling the Habit" (2006), "Alternative Energy" (2007), "Energy Usage" (2008), "Energy and Atmosphere" (2009), and "Glass Studio as Energy Source" (2010). While there are countless approaches to reduce the environmental impact of operating a glass studio, this discussion focuses on the advantages of sharing a studio with a group, where money can be pooled to afford high-efficiency technologies, reduce individual risk, and provide outreach programs for the local community and students of all ages. Funds may also be used to attract visiting artists who can provide educational opportunities for studio members and the community-at-large. For additional information, access the discussion forum at [www.bioglass.org](http://www.bioglass.org) ([info@bioglass.org](mailto:info@bioglass.org)) for these and other topics concerning green resources and tactics.

**Pratt Fine Arts Center** ([www.pratt.org](http://www.pratt.org)) is a Seattle institution founded in 1976 with the mission statement: *Pratt Fine Arts Center makes art accessible to everyone, offering a place for spirited exchange, self expression and personal transformation through creativity. Pratt is dedicated to fostering artistic development and engagement locally, nationally, and internationally. A unique multidisciplinary visual arts resource, Pratt provides education and instruction, community programs and professionally equipped art making facilities.*

**Pittsburgh Glass Center** ([www.pittsburghglasscenter.org](http://www.pittsburghglasscenter.org)) was founded in 2001 to bring art into an economically depressed neighborhood in Pittsburgh. The following is a snippet from their website: *Pittsburgh Glass Center is a public access school, gallery, and state-of-the-art glass studio dedicated to teaching, creating, and promoting glass art. World-renowned glass artists come here to make studio glass art. People interested in learning more about glass come here to take a class, explore the contemporary glass gallery and watch live hot glass demonstrations. As one of the top glass art centers in the world, we pride ourselves on providing exceptional resources and instruction to expand the skills and knowledge of our students and artists. We strive to foster a new generation of glass artists and enthusiasts here in the Pittsburgh region.*

**Viscosity Glass** ([www.viscosityglass.com](http://www.viscosityglass.com)) was founded by Scott Graham and Cristy Aloysi in Seattle, WA. By creating a community-access studio, they have been able to offset their expenses by bringing in rental revenue.

Pittsburgh Glass Center (PGC) began among hundreds of rundown buildings in a post-steel city. Funding was obtained to renovate the structure into a LEED certified building, one of the first. By reusing materials, the natural lighting, and heat reclamation systems, PGC became a model for Pittsburgh and the glass community. One of the first projects was a heat reclamation system in the ceiling of the hotshop hood. Pumps circulate a glycol/water solution through heat exchangers to pick up heat from the glass equipment. The water is moved to the boiler for any additional heating required before passing through space heating equipment in other parts of the building. In recent years upgrades to the glass-melting furnaces considerably reduced energy consumption and operating expenses. Other approaches to energy reduction are continually being entertained. Chris Clarke, Director of Studios and Technology at PGC, set up a furnace monitoring system that can be accessed by iPhone.



Pittsburgh Glass Center's "Teen Boot Camp" summer intensive week-long classes, instructor Melissa Fitzgerald, 2010, Photo by John Miller

The facility boasts a hot-glass studio with two furnaces and nine glory holes. The cold shop is equally well-equipped with flat wheels, lathes, belt sanders, and drilling equipment. There is also a sizable flame shop with 12 workstations at street level so passersby can see what's going on inside. A gallery rotates exhibitions. Programming includes many youth workshops, events that are open to the public, and intensive workshops with internationally acclaimed artists who attract students from around the world. The neighborhood has since become safer as renovation continues in the neighboring blocks. Because of the local and global nature of PGC's outreach programs, in conjunction with ongoing efforts towards sustainability, funding has continued to flow from both private and public sectors, including the Heinz Endowments for the Arts, for pursuing green building

reduce energy and material consumption, as well as space utilization simply by scheduling renters.

Community studios attract every age level as the public pops in from time to time and are inspired by the artists at work. Often these visitors become patrons, volunteers, assistants, close friends, mentors, employees, and/or employers. Sometimes youngsters in need of direction find a role model in artists. The benefits to the community are high.

*Below is a short list of community access glass studios:*

Banana Factory, Bethlehem, PA  
Bay Area Glass Institute, San Jose, CA  
Chicago Hot Glass, Chicago, IL  
Glass Axis, Columbus, OH  
Glass Furnace, Istanbul, Turkey  
GoggleWorks, Reading, PA  
M-Space, Tacoma, WA  
New Orleans Creative Glass Institute, New Orleans, LA  
New Orleans School of GlassWorks, New Orleans, LA  
Penland School of Crafts, Penland, NC  
Pittsburgh Glass Center, Pittsburgh, PA  
Pratt Fine Art Center, Seattle, WA  
Public Glass, San Francisco, CA  
S12, Bergen, Norway  
STARworks Glass Lab, Star, NC  
Toledo Museum of Art, Glass Pavilion, Toledo, OH  
The Crucible, Oakland, CA  
The Studio of the Corning Museum of Glass, Corning, NY  
Third Degree, St. Louis, MO  
UrbanGlass, New York, NY  
Viscosity, Seattle, WA

**Eddie Bernard** earned a BFA in glass from Rochester Institute of Technology (1996). That same year, he founded Wet Dog Glass, LLC, which designs and manufactures high-end glass-processing equipment. He has instructed numerous hot glass sculpting workshops at Penland School of Crafts, Glass Furnace in Istanbul, and the Studio of The Corning Museum of Glass. He and his wife Angela founded the New Orleans Creative Glass Institute, a nonprofit, community-access studio. They recently oversaw the creation of a second one, GlassLab, in Star, NC. He has served on the Board of Directors of GAS since 2004.

**Chris Clarke** has been the director of studios and technology at Pittsburgh Glass Center since it opened in 2001. He is responsible for the management, usage, maintenance, and improvements of the facility and its technology, including two 1,000 furnaces, eight glory holes, and 30+ kilns. He has also been working as an artist and metal fabricator for 15+ years, exhibiting his work at museums and galleries across the country. He received a BFA in sculpture from Massachusetts College of Art and an MFA in glass from Kent State University. In 2000 he received a Creative Glass Center of America fellowship.

**Scott Graham** is originally from Sacramento, CA. He started blowing glass at UrbanGlass in 1999, where he worked as a studio technician and freelance glassblowing assistant, and where he met Cristy Aloysi, his glassblowing partner and future wife. In 2001, they helped develop the Trash to Treasure program in the US Virgin Islands. In 2002, they moved to Seattle and started Viscosity, a contemporary glass line for the home. Viscosity Studio & Gallery followed soon after. Graham managed Viscosity Studio until 2010. He continues to gaff the Viscosity line, and with his wife maintains a studio in their home.

**Chuck Lopez** is originally from Denver, Colorado. He started working with glass in 1989. With a background in computer science, mathematics, and philosophy, he received a BA in philosophy from the University of Colorado in 1995, and a MFA from Alfred University in 1999. Lopez has been involved with Pilchuck Glass School since 1994, as a student, summer staff, teaching assistant, emerging artist-in-residence, centerpiece designer, and instructor. His work was selected for inclusion in *New Glass Review* in 2002 and 2007. He resides in Seattle, where continues to make art, teaches, and works at Pratt Fine Arts Center.



Panelists (from left to right) Chuck Lopez, Scott Graham, Chris Clarke, Eddie Bernard (moderator)

methods (as new, efficient, replacement furnaces), and the high school program, Sio2.

Scott Graham and Cristy Aloysi of Viscosity Glass have been able to run their privately owned, public-access studio without grant funding whatsoever. The main ingredients in their success are their own product line, rental income, showroom sales, and the reduction of overhead expenses by reinvesting funds in maintenance and equipment upgrades. When the studio was moved from a commercial space to their home, they switched from their original, deteriorating gas furnace to a new home-built electric furnace with silicon carbide heating elements. The result was a drop in utility expenses and a studio with lower ventilation requirements.



Viscosity Glass, a community access studio founded by Scott Graham and Cristy Aloysi in Seattle, WA.

Chuck Lopez discussed the process he went through with Puget Sound Energy (PSE) for Pratt to capture and provide PSE with energy and the natural gas consumption figures. The project was to collect data over several months tracking use of their deteriorating, non-recuperating, rectangle-style day tank, and then compare those figures against data collected when using a new recuperated cylindrical day tank. He was able to show fuel consumption reductions of 35%, and PSE wrote Pratt a check for \$40,000 for their efforts in reduction. He suggested browsing the local energy company's website to look for any incentives to fund equipment upgrades. It is important to do this prior to installing the upgraded equipment, because controlled measurements must be taken from both old and new equipment. To measure the consumption of just one piece of equipment, it was necessary for Chuck to turn all other gas burning units off. Therefore, he measured the furnace's consumption with glory holes turned off between 10 pm to 8 am during both idling periods and charging periods. The measurements were gathered easily by reading the natural gas meter before and after the 10 hour periods. After several idling and charging periods, the results were averaged to give a clearer picture of the consumption over time. Because data was gathered with great care and accuracy, PSE was confident that the numbers were realistic.

Viscosity Glass switched from gas to electric. Scott Graham said there were no incentives available, but they realized savings from the investment



Theresa Batty and Jean Brennan casting glass in a Master class by Deborah Horrell at Pratt Fine Arts Center, Seattle, WA

When an artist has sales requiring a hot-glass studio for only a few hours a day (12.5% / 3 hr/ day), a community studio is much more affordable than running a private shop. If 87.5% of the time the furnace is running could be scheduled with five renters for example (one after the other for 15 hours per day), it raises the level of use to 62.5%. When a glory hole is heated up to operating temperature, it uses roughly four times the energy required to maintain that temperature. If the same glory hole is used for 15 hours as opposed to only three hours per day, the initial heat up energy is more effectively used for a longer workday. Annealing ovens are similar; heating an oven once to be filled over 15 hours is less consumptive than heating up five ovens to fill over three hours. Consider also that a furnace melting 1,000 lbs typically would use 50% less fuel than two furnaces in the 400 lbs range, so with several people sharing a furnace, there is savings in fuel. Or compare five hot glass artists each running their own small furnace of 200 lbs at 40,000 Btu/hr (depending on make and tuning, this could be much higher) to a single 1,000 lbs furnace that idles at 80,000 Btu/hr. It takes 60% less fuel to keep 1,000 lbs melted in one furnace than 200 lbs in each of five furnaces. Furthermore, the community studio typically employs a technician skilled and focused on maintaining proper tuning of the furnace's gas and air mixture.

Let's also consider rental expenses from the point of workspace and initial investment for equipment. If those five artists purchased their own flattening wheels, lathes, drill presses, blades, wheels, and bits for a cold shop and they each ran electricity, water supply, and drainage piping to the equipment, the expenses are easily five times those of a single community studio. And the equipment would unlikely be used continuously by an individual artist. Fusing and casting ovens are rarely in continuous use in private studios. Neither are flameworking torches. In urban settings, community-access studios clearly