



# Glass Recycling in America Challenges and Opportunities

## Speaker Abstracts & Biographies

---

Thursday May 19, 2011

8:00 a.m. to 2:30 p.m.

8:00 a.m. – 8:15 a.m.

**Opening Remarks** - *Kenneth Lovejoy, VP, Environment, Health & Safety, O-I, Inc.*  
– *Session Chair*

### About the Chair

**Kenneth Lovejoy:** has been employed with O-I for 30 years in the Glass Division. Has been assigned to various assignments of increasing responsibility at numerous locations including Staff Engineer; Plant Engineer; Plant Superintendent; Plant Manager; Technical Director for European Operations, and VP-Facilities Engineering; currently he is the VP-Environment, Health & Safety. Graduated University of Toledo, Bachelors Degree from the College of Engineering in 1980.

8:15 a.m. – 8:45 a.m.

**Life Cycle Assessment of Container Glass** – *Margaret Zahller, Senior Analyst, PE Americas*

### Abstract

In 2008 PE Americas, a leader in life cycle consulting, completed a critically reviewed life cycle assessment (LCA) study for the Glass Packaging Institute (GPI) and member companies. The LCA followed the ISO 14040/44 standards to assess the cradle-to-grave environmental impacts of container glass in North America. Member companies provided the first industry wide primary life cycle inventory (LCI) data available on container glass, representing over 75% of North American production.

The LCA addresses all life cycle stages: extraction and processing of raw materials, energy production, transportation, manufacturing, and end-of-life. The use of post-consumer cullet displaces virgin materials (silica sand, soda, etc.) and requires less energy to melt in the glass producing furnace. The results demonstrate that even though post-consumer cullet requires treatment prior to input to the furnace (collection of used glass, transportation, crushing, etc.), increasing the use of post-consumer cullet in container glass manufacturing reduces the overall potential life cycle environmental impacts.

The data collected in this study show that in 2007 an average of 23% post-consumer cullet was input into new container glass. GPI member companies have committed to increasing recycled



input but will need an increase in glass recycling and post-consumer cullet availability to meet this goal.

## About the Speaker

**Margaret Zahller** Senior Analyst, PE Americas, Boston USA – A life cycle analyst at PE Americas since 2007, Margaret has been involved on Life Cycle

Assessment projects covering a wide variety of sectors and project structures, from product-specific studies to industry-wide environmental impact surveys. As the head of the PE Americas implementation and training team for the SoFi corporate sustainability platform, Margaret has dealt with a variety of emissions management and environmental regulations problems for a variety of stakeholders, from private corporations to public agencies.

Before joining PE Americas, Ms. Zahller worked at a number of research and policy organizations focused on energy planning, air quality compliance, and responsible purchasing. She holds a Master of Environmental Science and Management from the Bren School at University of California, Santa Barbara.

8:45 a.m. – 9:00 a.m.     *Questions & Answers*

9:00 a.m. – 9:30 a.m.

*Understanding the True Valuation of Cullet – Ann E. House, Sustainability Portfolio Cullet Program Leader, O-I, Inc. and Peter Walters, Vice President, Purchasing and Distribution, Verallia/Saint-Gobain Containers*

## About the Speakers

**Ann E. House** is the Global Cullet Program Leader for Owens-Illinois, the world's largest producer of glass containers. In this role, she is leading O-I's global initiative to nearly double its use of recycled glass, to a global average of 60 percent post-consumer recycled content in every O-I container. Prior to taking on this role, Ann has held various positions in Manufacturing, Finance, and IT, most recently having led a joint Business/IT project team responsible for the design and implementation of a global Profitability Analytics software solution.

**Peter J. Walters** Currently the Vice President, Purchasing and Distribution for Verallia. Employed with the Ball Corporation for 22 years ending his career as Vice President Purchasing and Distribution. Currently VP of one of the leading glass container manufacturers in the United States, designs, develops and produces glass bottles and jars for the wine, beer, beverage, spirits and food container markets.

9:30 a.m. – 9:45 p.m.     *Questions & Answers*

9:45 a.m. – 10:15 a.m.     *Morning Break*

10:15 a.m. – 10:45 a.m.

*An Industry System for Quality Measurement – Kathleen Flight, Manager of Cullet and Recycling Procurement, Verallia/Saint-Gobain Containers and Peter*



*Walters, Vice President, Purchasing and Distribution, Verallia/Saint-Gobain Containers*

### **Abstract**

Verallia's Commitment to Industry Recycling: Verallia has committed to GPI's Industry Recycling goal of 50% cullet usage by 2013. In 2009, just over 31% of all glass containers were recycled ([www.gpi.org](http://www.gpi.org)). Historically, recycled glass sourced from container deposit states produced a clean stream of cullet ideal for glass container manufacturers. However, most communities in the United States continue to turn to single stream recycling. Verallia is working diligently with the cullet processors to use state-of-the-art technology to process recycled glass but it's important to recognize the potential risks associated with using cullet sourced from single stream recycling. In order to ensure a quality product for customers while also working toward the goal to increase purchased cullet, Verallia has developed a procedure to objectively measure quality of incoming cullet. The procedure defines inspection criteria into four categories: Color, Organics, Porcelains, and Size. The presentation will focus on the detail of this procedure.

### **About the Speaker**

*Kathleen (Katie) Flight* graduated from Michigan State University in 2006 with a degree in Engineering Arts with a concentration in Supply Chain Management and in 2007 with a graduate degree in Manufacturing and Engineering Management. In 2007, Katie began working for Verallia's Management Leadership Development Program where she worked at Verallia's Dolton, Illinois plant. This program provided Katie with opportunity to learn and experience the glass manufacturing process from start to finish. After graduating from the program in December of 2008. Katie joined Verallia's purchasing department in Muncie, Indiana and obtained her current position as Manager, Cullet Procurement and Recycling Programs. In her current position, Katie is responsible for cullet procurement for Verallia's 13 plants in North America which consists of daily interaction with Verallia manufacturing plants and cullet suppliers. Katie is tasked with balancing competing agendas of more cullet volume at a higher quality.

*10:45 a.m. – 11:00 a.m. Questions & Answers*

*11:00 a.m. – 11:30 a.m.*

*Modern Technologies for Cullet Processing – Gerhard Glawitsch, Head of Sales – Environmental Technology – BT Wolfgang Binder GmbH*

### **Abstract**

More than 20 years ago, the first sensor based sorters for the removal of ceramics, stones and porcelain have been installed into cullet processing facilities in Germany. These units worked well for the beneficiation of source separated container glass with low level of contamination. Since then of course, technology has developed and improved a lot. Unfortunately however, at the same time as technology improved, the glass which is collected and sent to glass processing plants has become much worse. Today, In many countries including the USA, it mostly comes as 3-mix cullet with very high level of contaminants such as ceramics and rocks, organics, metals



and others. To make it even more difficult for recyclers, the amount of fines in the material is becoming higher and higher. This results in the need of even better and more efficient sorting technology and sorting plants.

The presentation will focus on the problems of converting 3-mix cullet into high quality, furnace- ready raw material for the glass industry. It will present the limitations of current technology and how equipment suppliers could tackle this challenge.

## About the Speaker

**Gerhard Glawitsch** has been employed with BT-Wolfgang Binder, Austria since 1998 as Head of Sales – Environmental Technology. With 20 years experience with the development, design and installation of recycled glass processing equipment and plants. BT-Wolfgang Binder is one of the leading suppliers of sensor based sorting equipment for the recycling industry. REDWAVE is the registered Trademark of BT-Wolfgang Binder for all sensor based sorting systems.

*11:30 a.m. – 11:45a.m. Questions & Answers*

*11:45 a.m. – 12:45 p.m. Lunch*

*12:45 p.m. – 1:30 p.m.*

***State Government Perspective on Glass Recycling – Panel Discussion - Moderated by Daniel K. Steen: Panelists: Gloria Hardegree, Executive Director Georgia Recycling Coalition, Scott Mouw, Chief of Community and Business Assistance North Carolina State Recycling Program and Frank Killoran, National Business Development Manager, Pratt Industries, Inc.***

## Abstracts

***The Role of Government in Recycling-Georgia's Perspective:*** With state agency status ever-changing based on budget constraints and political will, it has become more difficult to clearly define their role in recycling; most of the responsibility falls on the local governments, with some guidance from the state agencies. Georgia has three state agencies that might play a role in recycling: 1) Georgia DNR-EPD-Waste Reduction Unit; 2) Georgia DNR Sustainability Division; and 3) Georgia Dept of Community Affairs-Office of Planning & Quality Growth. As an NGO, Georgia Recycling Coalition partners on various programs and projects with these agencies, along with EPA Region 4, our local program managers, trade associations, and corporate partners to fulfill our mission of promoting and enhancing waste reduction & recycling in Georgia. In the last six years, working together with these entities, Georgia completed a waste characterization study; set commodity based per capita recycling goals; put programs in place to increase access and infrastructure; introduced a web based metrics collection system; and launched a recycling marketing campaign. The Georgia presentation will focus on these steps as well as the issues, challenges and successes experienced by several local governments in their glass recycling efforts.



**North Carolina's DIPPEA Recycling:** The most challenging aspects of glass recycling are the economics of collection, storage, initial processing and material transport. The lack of transferrable value and the heavy nature of glass pose significant obstacles to increasing glass recovery, and often make glass a cost liability in collection efforts rather than a valuable asset. What are the true economics of glass at the generator, collection program and MRF level? And what are the collection trends that will affect glass yield and quality? This presentation

will address those issues and suggest intervention options for the glass industry to help improve access to cullet.

## About the Speakers

**Gloria Hardegre** serving her 12<sup>th</sup> year as Executive Director of the Georgia Recycling Coalition, the state's 501(c)(3) recycling organization now in its 20<sup>th</sup> year of operation. She holds positions including: Atlanta Regional Commission's Green Communities Advisory Team; DeKalb County Green Commission; and is on the Board of Directors of the Southeast Recycling Development Council. In 2009 she was chair of Atlanta Recycles Steering Committee and on the Georgia Dept of Community Affairs State Waste Reduction Advisory Committee as well as the Sustainable Atlanta Initiative Recycled Materials Management Task Force. Gloria is a native Atlanta, and a graduate of Oglethorpe University. She received a Masters Degree in Educational Curriculum & Instruction from Georgia State University. Gloria was honored in 2009 with a Strengthening Partnerships Award by the US EPA Office Solid Waste & Emergency Response for her part in a Zero Waste Zone-Downtown Atlanta program.

The Georgia Recycling Coalition (GRC) is the 501(c)(3) state recycling organization in Georgia. Its mission is to promote & enhance waste reduction and recycling programs & activities in the state. It is comprised of members representing all sectors of the recycling industry. GRC was awarded the Recycling Coalition of the Year for 2008 by the National Recycling Coalition. Atlanta Magazine recognized the Georgia Recycling Coalition and its EcoVille website in the Best of Atlanta December 2009 issue for Best Eco Service in its "Thrive-make life easier and healthier" category. In 2011, GRC celebrates its 20<sup>th</sup> Anniversary!

**Scott Mouw** is the Chief of Community and Business Assistance in the Division of Pollution Environmental Assistance and Outreach. In this capacity, he oversees the state's recycling program, which includes efforts to improve material collection, develop material markets, increase public commitment to recycling, help create and implement materials management policy, and promote environmentally preferable purchasing. Scott serves on the boards of the Product Stewardship Institute (PSI) and NC Keep America Beautiful and sits on the Advisory Council of the Southeast Recycling Development Council. He is a current participant in the EPA Sustainable Recycling Financing dialogue, the SPC Labeling project, and APR's rigid plastics committee.

**Daniel K. Steen** serves as Vice President of Government Affairs for Owens-Illinois, Inc. (O-I), the world's leading glass container manufacturer. Based in the Washington, D.C. area, he provides strategic direction for the government affairs efforts of the Company in its four regions: Europe, North America, South America and Asia Pacific. He coordinates O-I's global engagement on behalf of effective environmental and health laws, as well as the wide range of regulatory and tax policies that impact all manufacturers. He is particularly active on behalf of





O-I's efforts to gain more post-consumer glass through effective public recycling policies. He leads the Company's outreach to non-governmental organizations and is involved in the Company's community affairs engagements.

Dan serves as the Chairman of the Government Relations Committee of the Glass Packaging Institute, the North American industry association for the glass container industry. He also serves as the Chairman of the National Public Affairs Steering Committee (NPASC) and of the Legal Issues Policy Committee of the National Association of Manufacturers. The NPASC is a professional organization of 140 government and public affairs leaders from the manufacturing sector engaged in advocacy for U.S. manufacturing. Dan is on the California Manufacturing and Technology Association's Board of Directors and the Board's Executive Committee. He represents O-I to the European Association for Packaging and the Environment (EUROPEN) and is closely engaged with the European glass container federation (FEVE). He is the Vice Chair of the newly formed U.S.-Poland Business Council.

Dan is a 1984 graduate of Mary Washington College (now University of Mary Washington), a leading public, liberal arts university located in Fredericksburg, Virginia, and received his JD from the University of Virginia School of Law in 1987. He has been appointed to consecutive terms on the University of Mary Washington's Board of Visitors by Governors Mark Warner and Tim Kaine, and he currently serves as Rector of the University Board.

*1:30 p.m. – 2:15 p.m.*

***Panel Discussion*** – Moderated by *Kenneth Lovejoy*: All Faculty: *Bill Waltz*, Chairman and CEO, Strategic Materials, *Curtis Bucey*, President and COO, Strategic Materials, *David Hudson*, Vice President Government Affairs, Strategic Materials, and *Steve Bowles*, Owner, Reflective Recycling

## **About the Speakers**

***Bill Waltz, Chairman & CEO*** prior to joining Strategic Materials, Bill was President of a global division with over a billion dollar in revenues and nine worldwide manufacturing facilities for Pentair Inc., a New York Stock Exchange diversified manufacturing company. During his 15 year Pentair career, Bill gained broad experience in all facets of business and held various positions of increasing responsibility including leading international operations, running sourcing, and leading other Pentair divisions. Bill started his career with General Electric in a management training program and worked in Information Technology and Manufacturing. In addition to GE, Bill worked for Deloitte and Touche. Bill also has served as the Chairman of an International Trade Association. Bill holds a BS in Engineering from Penn State, an MS in Computer Science from Villanova University, and an MBA from Northwestern University's Kellogg Graduate School.

***Curt Bucey, President and Chief Operating Officer*** Mr. Bucey joined the Company in November 1993 as Vice President of Sales. Currently, he is responsible for all Glass Division operations. Prior to joining the SMI, Mr. Bucey was employed by Anchor Glass, one of the Glass Division's top ten customers, for 12 years, where he held the position of Marketing Manager-Food Industries.



***David Hudson, Vice President of Government Affairs*** David joined Strategic Materials in December of 2010 to lead the company's government and industry affairs initiatives. Prior to joining Strategic Materials, David worked for Owens Corning for 8 years where he held leadership positions in Government Affairs, Manufacturing Operations, and Sales Leadership. Previous to his time at Owens Corning, David worked in the financial services industry for Invesco, UBS Financial Services, and Prudential Insurance holding roles in the areas of investment wholesaling, equity sales, and compliance. David holds a MBA in Global Leadership from Tulane University and a BBA in Management from Texas State University.

***Steve Bowles currently owns and operates a group of four privately held companies know as Reflective Recycling, Reflective Industries, Reflective Recycling of SC, and Reflective-BevCon.*** Steve first became involved in glass recycling in the mid 70's, as a Glass Packaging Institute glass recycling "advocate". He has over 35 years of experience in the glass container, and glass recycling businesses. After twenty years in a variety of positions with Anchor Hocking, and Anchor Glass Container, Steve was named President of the Recycling Division of Allwaste Inc. in July of 1993. He was a leader of the initial leverage buyout of the Allwaste Division, and served as President and COO of the newly formed company named Strategic Materials until May of 2000. In 2001, Steve started Reflective, and built his first plant. Over the last ten years, he has built ten glass recycling facilities in North America. In 2010, the Reflective plants provided over 200,000 tons of recycled glass to the glass container, plate glass, fiberglass, bead, and specialty products industries. During the coming year, Reflective will complete its eleventh plant, a "state of the art" ceramic detection and optical sorting facility capable of cleaning and sorting over 120,000 tons per year of three mix single stream glass.

2:15 p.m. – 2:30 p.m.

***Symposium Closing Remarks – Kenneth Lovejoy, VP, Environment, Health & Safety, Owens-Illinois, Inc.***

2:30 p.m.      ***Symposium Concludes***

## Recycling Symposium Program Committee

---

- A. Kenneth Lovejoy, VP Environment, Health & Safety, O-I: GMIC Recycling Symposium Program Committee Chair
- B. Paul J. Smith, Global Sourcing Manager, Owens Brockway Glass Container, Inc.
- C. Ernest P. Guter, Research Associate – Glass Batch Melting Technology: Owens Corning
- D. Daniel K. Steen, Vice President Government Affairs: O-I
- E. Peter Walters, Vice President Purchasing and Distribution: Verallia/Saint-Gobain Glass Containers
- F. Joseph Cattaneo, President: Glass Packaging Institute
- G. Robert Weisenburger Lipetz, Executive Director: Glass Manufacturing Industry Council