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Glass Industry Sustainability GMIC DOE Study Points the Way

Climate change is a serious topic for discussion in living rooms and board rooms around the world these days. Many glass companies have created senior positions to address the implications of such changes in our environment and in today's businesses as well. To obtain a better understanding of these changes and their many ramifications, the GMIC—with assistance from DOE—commissioned a study that was carried out by Warren W. Wolf Jr., an industry consultant, past ACerS president and former vice president of technology at Owens Corning.

The results of this investigation have been published in a report entitled, "Sustainability Study of U.S. and European Glass Industry—Carbon Constraints and Energy." While the full document can be downloaded from the "News" page of the GMIC website (www.gmic.org), here is a summary of the study's parameters, main findings and conclusions.

Seven U.S. and five European industry

executives responded to the survey. These responses were followed up by one-on-one discussions, which clarified and rounded out the information provided.

The initial step was to seek agreement on what "sustainable manufacturing" really is. While the GMIC welcomes suggested modifications, here is the definition that was generally agreed to:

The creation of manufactured products that use non-polluting processes; conserve energy and natural resources; and make products which create economic value and are safe within both the workplace and the community where made and are safe to use.

Most U.S. respondents expected carbon constraints in one to three years. Europe, of course, already has legislation in place that is being reviewed.

Some respondents expressed concern that glassmaking would become more challenging as carbon constraints increased.

The study also revealed, however, the plus side of carbon constraints—that they substantially increase the need for glass industry products: insulation; higher R-(and other) value, energy efficient flat glass; lighting innovations; and solar opportunities.

The study also suggested that the global glass industry might well wish to collaborate to make the industry and the benefits of our products more visible to the public and government regulators.

Concern was voiced about the cost and availability of natural gas. The expectation was that the situation would get worse over the next five to 10 years, and some respondents felt companies might need to leave the United States for offshore operations.

Respondents expressed a general reluctance to become involved in alternative energy production (such as coal gasification), placing additional importance on initiatives that reduce energy needs

through the use of such technologies as cullet and/or batch preheating.

How did the study's respondents think these issues should be addressed? Most agreed on the need for further collective action at national and global levels, suggesting that energy saving programs should be the first priority.

It was also felt Life Cycle Analysis (LCA) protocols should be developed in order to demonstrate a consistent picture of glass making, glass use and glass-recycling processes. This would reflect the glass industry's true impact on society and on the environment.

Respondents also indicated that more universal approach and collective interest in glass recycling should be developed within the global industry.

The role of government also was a consistent theme. Respondents favored government incentives and support for development of new technologies, indicating that both would significantly improve energy reduction and encourage the effective use of energy-saving glass products in homes and business settings. (Government support was felt to be minimally in effect in the United States. Minimal collaboration and sharing of public information on best practices also was seen to exist between U.S. and European governments.)

Perhaps the glass industry can take the lead in some of these areas.

We invite you to download the results of the full document and welcome suggestions or offers of collaboration from any glass entity anywhere.

Michael Greenman, Executive Director
Glass Manufacturing Industry Council
tel +1-6148189423
fax+1-614-818-9485
mgreenman@gmic.org
www.gmic.org

