



Address 100 Barr Harbor Drive
PO Box C700
W. Conshohocken, PA
19428-2959 | USA

Phone 610.832.9500
Fax 610.832.9666
Web www.astm.org

Committee E44 on SOLAR, GEOTHERMAL AND OTHER ALTERNATIVE ENERGY SOURCES

Chairman: GEORGE J KELLY, Bp Solar, Frederick Technology Ctr, 630 Solarex Court, Frederick, MD 21703, United States (301) 698-4361, Fax: (301) 698-4305, e-mail: george.kelly@bp.com
Vice Chairman: LIANG Ji, Underwriters Laboratories Inc, 333 Pfingsten Rd, Northbrook, IL 60062, United States (847) 664-1200, Fax: (847) 407-1176, e-mail: liang.ji@us.ul.com
Secretary: CARL R OSTERWALD, National Renewable Energy Lab, 1617 Cole Blvd, Golden, CO 80401, United States (303) 384-6764, Fax: (303) 384-6790, e-mail: carl_osterwald@nrel.gov
Staff Manager: CHRISTINE M DE JONG, (610) 832-9736, Fax: (610) 834-3667, e-mail: cdejong@astm.org

Potential ASTM Solar Glass Standards Conference call Monday, June 22nd 3:00-4:00pm

Participants

George Kelly (BP Solar, E44 Chairman)	Fred Quan (GMIC)
Mike Greenman (Glass Manufacturing Industry Council)	Doug Goforth (Dow Corning)
Rick Wright (Oldcastle Glass, C14 Chair)	Jim Webb (Dow Corning)
Carl Osterwald (NREL, E44.09 Subchair, E44 Secretary)	Glenn Strahs (DOE)
Emilio Spinosa (O-I, C14 Vicechair)	Jeff Mazer (DOE)

Christine DeJong (ASTM International, E44 Staff Manager)
Tom O'Toole (ASTM International, C14 Staff Manager)
Pat Picariello (ASTM International, Director of Developmental Operations)

Discussion

Glenn Strahs opened discussions by explaining about a working group that met in April 2008 to determine how glass and solar could best meet each others' needs. Glass strength rose as an issue. A need for solar glass standards was also identified. Any solar manufacturer would want to purchase their glass from different suppliers so long as met necessary standards. Glenn wants to explore if ASTM could be one group that could assist with developing standards related to solar glass. The Solar Glass working group, consisting of glass and solar industry companies, will re-convene to determine if this is the way to go.

Existing glass & Solar standards

Rick Wright questioned the E44 members whether or not E44 developed glass standards in the past and whether some were still in existence but there was no knowledge of this. Christine DeJong will do preliminary research on historical ASTM standards related to Solar Glass and to identify if there are existing solar glass standards in other SDO's.

About ASTM standards development, process, time, updates, final products

Pat Picariello discussed the ASTM standards process. The industry will identify a particular need. Then we aid in the search of existing standards. If a standard exists, it is made available to the group and then we build upon them if needed. If no standard is published, a Task Group within the ASTM technical committee is formed to develop one. A task group is the smallest group of key technical experts which develop the first draft. Task groups are formed under particular subcommittees of narrowed technical expertise under the umbrella of the main committee's scope of standards work. With new activity, ASTM operates on assumption that there may be a likely home, most likely expertise isn't there, or it would be already going on. ASTM works with the committee or organization to do a robust search to ensure have necessary expertise.

ASTM Technical Committees serve as microcosm of the industry. It represents the industry, regulatory, and academic (national and international). ASTM has a proactive management philosophy and staff works closely with

technical committees, to ensure schedules and standard development is met. ASTM offers free online tools for standards development (balloting, minutes, meeting registration, standards downloads, collaboration areas, meeting agendas, etc) All the work done on line, supplemented by virtual and face-to-face meetings. Most technical committees meet face-to-face twice a year during ASTM Committee Weeks and can be held in conjunction with virtual meetings.

Process begins with formal registration of work items on the ASTM website by the Task group leader. The task group will determine the title, scope statement and rationale for the development of the document are needed to register the work item. ASTM has standards templates for all types of standards offered to make writing the document an easier process. We also have editorial staff to provide assistance.

The formal balloting begins at the subcommittee level. ASTM ballots are open for a minimum of 30 days. The end of process is main committee ballot or concurrent ballot (main and sub-committee). When negative votes are resolved and cleared, standard is approved. Process takes about 12 months from start to finish (about 200-300 standards per year). ASTM regulations require that all ASTM standards complete a ballot action every five years. Staff works closely with the committee to provide them profiles on their standards and aids them with getting the items to ballot at least every five years.

Relation to/need for compatibility with other international standards developers (ex. ISO)

Pat discussed how ASTM and ISO (and other SDOs) are competitors in some ways, cooperative in others. ASTM and ISO reference each others standards frequently.

Discussions on separate glass coatings standards in addition/separate from glass content standards

Three existing ASTM standards related to glass were discussed. [C1036 specification on flat glass quality](#); [C1048 on tempered glass](#) (but iron content is not a factor, nor is coatings); and [C1376 on coatings on architectural glass](#)

Transmission – overall across spectrum or wavelength by wavelength.

Rick - Typically looking at total solar spectrum, but some might need specific wavelengths. Have no problem with E-44 developing solar glass component specifications.

Soda-lime vs borosilicate?

Carl – Photovoltaic and others in solar world need to define what properties need to be expressed. Could find out what ISO has on glass in buildings or solar.

Rick – soda lime has won against borosilicate on basis of price. May be some desire to look at that if desirable properties. If strength is being worked on that could make a difference. Coatings are thin could wear off, hailstone environment could affect. Hurricane impact could also be a factor.

Next steps

1. Christine DeJong will set up a virtual meeting with Mike Greenman, Jeff Mazer, Glenn Strahs and Pat Picariello to define the scope of this project further and determine possible target organizations.
2. Once a project scope is identified, ASTM can do a press release to solicit industry participation.
3. Form a task group of industry experts to beginning drafting the document.
4. Register a Work item on the ASTM website.