## 90.2/189.1/ Advanced Energy Design Guides

# NIST Workshop to Identify Strategies to Get to Net Zero Energy Homes

Merle McBride, Ph.D., P.E.
Owens Corning

September 14, 2011

### AIA 2030 Challenge

Edward Mazria, AIA



"Net Zero Energy Buildings by 2030"

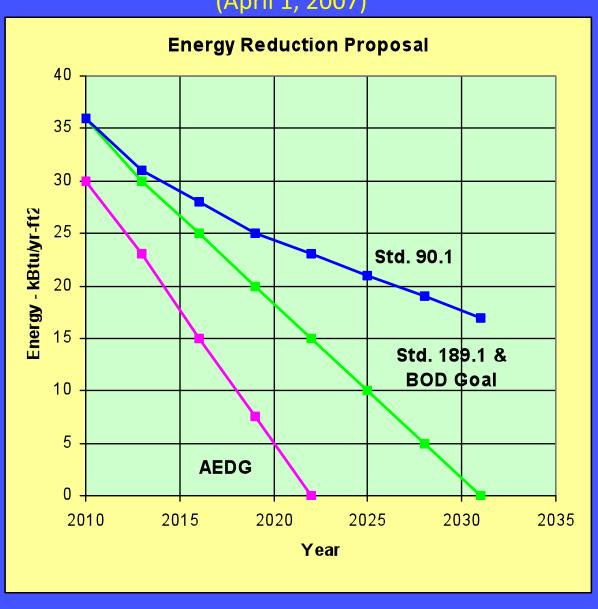
### Alignment on 2030 Challenge

AIA
ASHRAE
USGBC
U.S. Conference of Mayors
State of Florida



#### **ASHRAE** Board of Directors

(April 1, 2007)



#### SSPC 90.2

#### **Proposed Significant Changes:**

- 1 New format, structure and organization easier to understand and simpler to use.
- 2 TPS expanded to include criteria for lighting (IES co-sponsor), pools and spas.
- 3 Targeted to achieve 30% energy savings over Std. 90.2-2004 and IECC 2006.
- 4 Four prescriptive paths per climate zone.
- 5 Retained the annual energy cost tradeoff option using hourly simulations.

### Focus of the Four Prescriptive Paths

- 1 Improve envelopes
- 2 Upgrade HVAC equipment efficiencies beyond NAECA minimums
- 3 Increase envelope air infiltration tightness and duct leakage tightness
- 4 A combination of the above features

### Advisory Public Review

(May 13 through June 12, 2011)

- 38 Commenters
- 126 Comments
- 10 Commenters addressed SSPC 90.2 in Montreal

#### **ASHRAE BOD - Montreal**

"that the Board of Directors direct Technology Council to provide guidance to Standards Committee at SSPC 90.2 to position Standard 90.2 as a leadership Standard. The Council will consider increased energy efficiency, sustainability, and health and safety."

### **Technology Council**

- Created a Standard Advisory Panel (SAP) 8/8/11
- 17 members
- Conference Calls 8/17, 8/25, 8/29, 9/6, 9/12
- Final report due mid-to-late October

#### 90.2 SAP

#### Options under consideration include:

- Maintain current path allow process to work
- Target 50% energy efficiency improvement
- Green standard