Insulation for Wood Frame Construction – Part 2 Wall Panel Performance Testing, prepared for the Society for the Plastics Industry, 1992, Spray Polyurethane Foam Division: Upper Marlboro, MD.
[12] NAHB Research Center, ASTM E72: Wall Racking Test Report, prepared for the Society for the Plastics Industry, 1996, Spray Polyurethane Foam Division: Upper Marlboro, MD.
[13] Duncan, R. and J. Wu. Closed-cell Spray Foam: Resisting Wind Uplift in Residential Buildings. Spray Foam Conference. 2008. Torrey Pines, CA.
[14] American Society of Heating, R.a.A.C.E., ASHRAE 90.1-2010: Energy Standard for Buildings Except Low-Rise Residential Buildings, 2010.
[15] US Department of Energy. US DOE Software Tools – Energy and Efficiency and Renewable Energy: Building Energy Software Tools Directory. 2011 [cited 2012 May, 15th]; Available from: http://apps1.eere.energy.gov/buildings/tools_directory/subjects.cfm/pagename=subjects/pagename_menu=whole_building_analysis/pagename_submenu=energy_simulation.
[16] Advanced Energy, Houston Home Energy Efficiency Study, 2009: Raleigh, NC.
[17] Sustainable Solutions Corporation, SPF Residential Energy Modeling Analysis / SPF Commercial Energy Modeling Analysis, 2012: Spray Polyurethane Foam Alliance.
[18] NAHB Research Center, NAHB Builders' Practices Survey: Upper Marlboro, MD.
[19] NAHB Research Center, Air Infiltration Data Analysis for Newly Constructed Homes Insulated with Icynene Spray Foam, 2007: Upper Marlboro, MD.
[20] Chan, W. R., et al., Analysis of US Residential Air Leakage Database, 2003, Lawrence Berkeley National Laboratory: Berkeley, CA.
[21] Sherman, M. H. and N. E. Matson, Air Tightness of New US Houses: A Preliminary Report, 2002, Lawrence Berkeley National Laboratory: Berkeley, CA.
[22] US Department of Energy. Reference Building – Strip Mall post-1980 Construction. 2012 [cited 2012 May, 15th]; Available from: http://www1.eere.energy.gov/buildings/commercial_initiative/after_1980.html
[23] Johnas, C. and H. Walter-Terrinoni. A Life Cycle Look at Spray Foam Expansion Agents: A Cradle-to-Grave Analysis. CPI Polyurethanes 2011 Technical Conference Proceedings. 2011.

Piedmont launches 100 % renewable polyester polyols

Piedmont Chemical announced a new offering of renewable, sustainable polyester polyols. The company combines **Susterra** propanediol from **DuPont Tate & Lyle Bio Products (DTL)** with bio-succinic acid from **Myriant Corporation** to produce 100 % bio-based polyols that are said to be functionally equal and cost-competitive with petroleum-derived polyols. The new polyol formulations, which are made from renewable resources, enable the production of eco-friendly, sustainable PU products in industrial applications, including paints and coatings, adhesives and sealants, and microcellular elastomers.

Piedmont, DTL and Myriant have agreed to an "open innovation" concept by which the polyol formulations will be made available to polyol producers and the polyurethanes industry at large. This means that customers will be able to purchase polyols from Piedmont as well as from other polyol producers. Piedmont will manufacture the initial polyol product samples and will offer commercial supply of the polyol products to the market. The technical specification and polyol samples will be available by year-end, says the company.

DTL commercially produces Susterra propanediol from corn sugar in Loudon, TN, USA, with a capacity of 140 million lbs (~ 63,500 t) per year. The plant has been operational since November 2006. The company is a joint venture between **DuPont** and **Tate & Lyle,** a renewable food and industrial ingredients company.

Myriant utilises its proprietary technology platform to develop renewable chemicals based on low-cost sugars. In December 2010, the company broke ground on its flagship 30 million lbs (~ 13,600 t) per year commercial bio-succinic acid facility in Lake Providence, LA, USA, and anticipates beginning commercial production in the first quarter of 2013. The company has agreements with **ThyssenKrupp Uhde GmbH** for engineering, **Davy Process Technology** for the integration of Myriant's bio-succinic acid process with the Davy butanediol process for the production of bio-based butanediol, and **PTT Chemical** for the commercialisation of Myriant's technology in Southeast Asia. The company is headquartered in Quincy, MA, USA.

Piedmont Chemical is a privately owned chemical manufacturer headquartered in High Point, NC, USA. Founded in 1938 to support the local textile industry, the corporation has since evolved into five different production sites in North and South Carolina as well as Tennessee with additional satellite facilities in the Caribbean, Central America and Asia.

According to a 2012 report by **Global Industry Analysts, Inc.** entitled, "Polyols: A Global Strategic Business Report," the world market for polyols is forecast to reach 4.33 billion lbs (~ 2 million t) by 2017.