



BUILDING AMERICA TOP INNOVATIONS 2013 PROFILE

INNOVATIONS CATEGORY:

3. Effective Guidance and Tools
- 3.1 High-Performance Home Solutions

TOP INNOVATOR:

PNNL

Building America Solution Center

The Solution Center, developed by PNNL, makes Building America's wealth of building science expertise readily available to the nation's 96,000 home builders and 74,000 remodeling companies, who employ more than 800,000 designers, architects, builders, contractors, and trades.

The Building America Solution Center is a single web tool connecting users to thousands of pieces of building science information developed by the U.S. Department of Energy's Building America program and its research partners.

DOE's Building America program has funded decades of research by some of the brightest minds in the field of building science. However, the practical application of this knowledge by builders, contractors, and homeowners in the field has been somewhat hampered by lack of accessibility. The information has been slow to get published, located in disparate locations, not often recognizable as sponsored by DOE, difficult to search for, inconsistently formatted, and written in technical language, rather than understandable instructions.

The Building America Solution Center, developed by the Pacific Northwest National Laboratory for DOE, brings this information together in a single web-based tool that is easily accessible and understandable by a multitude of users. By increasing accessibility, the Solution Center is getting information into the hands of more builders, renovators, inspectors, code officials, and other building professionals. Increasing the speed and ease with which builders can find this information makes them more likely to put the information into practice. Associated program changes are streamlining how guidance gets published and will make content more fresh and relevant.

The accessibility and search capabilities encourage builders and installers to continue using this resource. A mobile field kit feature allows users to store guides and drawings on their mobile devices for use in the field. The visual nature of the content, which includes illustrated how-to steps, right and wrong photos, CAD drawings, and (potentially) video, encourages use of the Solution Center for training. Several organizations have mentioned they will be using the Solution Center for code implementation support.

The Solution Center provides a vital link between building science research, market transformation programs, and the builders and installers who create and re-create homes for the marketplace. The BASC conveys the latest research results to help builders meet partnering program goals. For example, homes built to the



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Recognizing Top Innovations in Building Science – The U.S. Department of Energy's Building America program was started in 1995 to provide research and development to the residential new construction and remodeling industry. As a national center for world-class research, Building America funds integrated research in market-ready technology solutions through collaborative partnerships between building and remodeling industry leaders, nationally recognized building scientists, and the national laboratories. Building America Top Innovation Awards recognize those projects that have had a profound or transforming impact on the new and retrofit housing industries on the road to high-performance homes.



(Top left) Users can search the Solution Center by building component, by keyword, or from energy program checklists.



The Building America Solution Center makes world-class research accessible to builders and contractors everywhere.

ENERGY STAR Version 3 checklist are approximately 20% more efficient than homes built to the 2009 International Energy Conservation Code (IECC), and information supporting this program was the first priority in launching the Solution Center. The DOE Challenge Home objective is around at least 30% more efficient than IECC 2009 and will result in homes that are zero net-energy ready. Future work will also include technical support for existing homes.

While the Solution Center has only been publicly available since January 2013, it has received over 32,000 unique visitors. The site is too new to make broad statements, but the average amount of time users are staying on the pages generally continues to climb, indicating users are finding value in the content. The average time a user spent on each page was ~2.4 minutes in May and ~2.1 minutes in June, up from 1.1 minutes in January.

Another way to quantify results is to evaluate how partnering programs are using the Solution Center. ENERGY STAR for new homes has dropped its support of field guides and now links to the Solution Center as its source for technical information for participating builders. A regional ENERGY STAR program for new homes in the Pacific Northwest has followed suit and, in addition, has developed a template for raters to download information and package it for builders. At least three code agencies and the DOE Building Energy Codes Program have linked to the Solution Center.

SOLUTION CENTER WEBSITE STATISTICS JAN – AUG 2013

Statistic	Total	Avg monthly
Page Views	142,417	17,802
Unique Visitors	45,527	5,691
Downloads	9,311	1,164
New User Registrations	490	61.25

REFERENCES

DOE. 2013. Building America Solution Center, U.S. Department of Energy Building America Program, <http://bart.pnl.gov>

Rashkin, S. 2013. “Thinking Outside the (Tool) Box with the Building America Solution Center,” U.S. Department of Energy, <http://energy.gov/articles/thinking-outside-tool-box-building-america-solution-center>

NAHB. 2013. “Building America Solution Center: Linking Innovations to Industry.” National Association of Home Builders, www.nahb.org/generic.aspx?sectionID=2629&enericContentID=210413

EcoHome. 2013. “DOE Unveils Building America Solution Center,” *EcoBuilding Pulse*, posted Jan 22, 2013, www.ecobuildingpulse.com/news/2013/01-january/doe-launches-building-america-solution-center.aspx

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The U.S. Department of Energy’s Building America program is engineering the American home for energy performance, durability, quality, affordability, and comfort.