

Having trouble viewing this email? [Click here](#)

You're receiving this email because of your relationship with Building Science Corporation. Please [confirm](#) your continued interest in receiving email from us.

You may [unsubscribe](#) if you no longer wish to receive our emails.

information consulting bookstore seminars

building science.com e-news

Changing the way the world builds. People. Ideas. Integrity.

June 5, 2009 Issue # 14

Dear Jeffrey,

The most important thing in green building design? Awareness of the importance of operational energy consumption, prediction of energy consumption, and confirmation that the designed low-energy building is actually built and operated as one. Read our featured article "Why Energy Matters" by John Straube below.

Our second featured article looks at how the solvability of the transportation problem (it has to do with the supply of the fuel) will most definitely spike the demand for said fuel. The impact on our buildings will be immeasurable. What do we need to do to get ready? Read "Energy Security (and saving the planet)" by Joe Lstiburek.

We have included a brief note below our articles to make you aware of 3 upcoming seminars taught by these 2 writers.

To view a list of past newsletters, click [here](#) for our archives.

Happy reading!



Jeff Melvin
Editor, buildingscience.com e-news

[Forward buildingscience.com e-news to a friend!](#)

Featured Article by John Straube, Ph.D., P.Eng.

Why Energy Matters

Building Science Insight No. 12

The environmental crisis, and hence green building design, revolve around a wide range of issues: habitat destruction, stormwater run-off, air pollution, climate change, and resource use. However, the on-going consumption of energy to operate, condition, and light a building, as well as the energy embodied in on-going maintenance is the largest single source of environmental damage and resource consumption due to buildings. Energy security and carbon emissions have signaled an even stronger focus on energy in green buildings, particularly as the energy consumption growth rate of countries such as China, Russia, India and Brazil increase.

Reducing the operational energy use and increasing durability should be the prime concerns of architects

who wish to design and build "green" buildings. I have reached this conclusion after spending years looking at actual building energy consumption, reviewing countless computer simulations, and being involved in numerous green building charrettes. It has even been suggested (Lstiburek, 2008) that 80% of a green architect's concern should be directed towards reducing energy consumption during operation. [article continues]

To read the entire feature article and find a downloadable PDF version, click [here](#) to visit our web page.

Featured Article by Joe Lstiburek, Ph.D., P.Eng., Fellow ASHRAE

Energy Security (and Saving the Planet)

Building Science Insight No. 20

Energy security is pretty easy to get a handle on-don't buy oil from the Middle East, Russia, Nigeria and Venezuela. We don't need it anyway. We have plenty of energy right here in good old North America. The problem is that it is not cheap energy and it is not clean energy. We can make it clean, and we will, but it will be even more expensive. And actually that is good because we won't waste it when it is expensive.

To be perfectly clear we don't have an energy crisis we have a cheap oil crisis. We are running out of light, sweet, Arabian crude (Figure 1 and Figure 2). And guess who has the oil (Figure 3)? The sooner we run out of it the better. As soon as the price of oil gets high enough we will change over to another energy source.

Here's the way I see it. The first thing you have to understand is that energy security is first and foremost a car-truck-transportation problem that-as it gets solved-will change the rest of the economy-for the better I might add. In fact we have already solved the transportation problem although most folks don't appreciate it. The good news is that the Government didn't do it and couldn't do it. The bad news is that Government might yet still screw it up. I want the marketplace and innovation to sort it out. The only thing we need from government is a modicum of environmental protection so we don't pee in our collective planetary bed while this gets sorted out. I think we can count on that-the environmentalist's heads would otherwise explode run the vehicle using juice we get from the grid rather than juice we get from the gasoline. As we transition current hybrid vehicles from nickel hydride to lithium ion battery technology we are going to be able to plug-in the vehicle and get 50 to 75 miles between charges. This is a big deal because this is the distance of the average commute. And we don't have to worry about running out of battery power because we still have the gasoline there to take over when we run the battery down. [article continues]

To read the entire feature article and find a downloadable PDF version, click [here](#) to visit our web page.

Upcoming Events in the 2009 Building Science Seminars Series

[Building Science Fundamentals - July 15-16 - Seattle, WA](#)

Building Science Fundamentals is a two-day seminar that teaches the basic knowledge needed to design and build durable, energy efficient, affordable and healthy buildings.

[Designing Low Energy Buildings: Tools, Techniques and Technologies -July 30 - Westford, MA](#)

In this one-day seminar, John Straube will examine challenging techniques for heating, cooling and ventilating low energy buildings, including: natural ventilation, radiant heating and cooling, and passive design approaches for commercial and advanced residential building enclosures.

[Joseph Lstiburek: Figuring Stuff Out -July 31 - Westford, MA](#)

In a one-day seminar, Joseph Lstiburek will provide an entertaining and provocative examination of building investigation approaches based on a lifetime of experience . . . "stuff you don't find in books."

For the complete list of seminars, click [here](#).

New on buildingscience.com . . .

High Performance Housing Information Sheets

by BSC Staff

We have posted a set of short information sheets to help designers, builders, trades and home owners understand critical high performance housing issues. These documents were produced as part of the US Department of Energy's Building America program's research into Quality Management Systems for high performance housing. The growing set provides support for issues that BSC commonly sees in the field. Click [here](#) to see the subcategory folders.

High R-Value Enclosure Case Studies

by Jonathan Smegal and John Straube

BSC has undertaken a study for the US DOE's Building America research program to identify and evaluate residential enclosure assemblies that cost effectively provide 50 percent improvement in thermal resistance. Details regarding water management, air management, vapor management and thermal management are described in the following sheets. Look for future wall, foundation and roof case studies. Click [here](#) to see the two-page case studies that are currently online.

International Residential Code FAQs

by Peter Baker, P.Eng.

BSC's Peter Baker has developed a series of answers to commonly asked questions about specific International Residential Code clauses including basement insulation, cladding attachment, vapor barrier requirements and wall bracing for insulating sheathing, and the construction of conditioned attics. The list of IRC FAQs can be found [here](#).

Sign Up For This Newsletter!

About BSC

Building Science Corporation is a Boston, MA and Waterloo, Ontario based architecture and building science consulting firm with clients throughout North America.

Building Science Corporation specializes in building technology consulting. Our focus is preventing and resolving problems related to building design, construction and operation.

We are internationally recognized for our expertise in moisture dynamics, indoor air quality, and forensic (building failure) investigations. We are also on the leading edge of the design of sustainable communities and buildings.

We believe in promoting energy efficiency and environmental responsibility within the constraints of marketable and affordable building technology.

Read More About Us: www.buildingscience.com



You are receiving this newsletter either because you have requested it or because of your relationship with Building Science Corporation.

To opt out any time from receiving this newsletter, click on the "unsubscribe" link below. Otherwise, to ensure that you continue to receive this newsletter, please add newsletter@buildingscience.com to your address book now.

Your privacy matters to us.
We are not going to sell, rent, lend or share your information with others.

Copyright © 2009 Building Science Corporation, All rights reserved

You may reproduce this article by including this copyright.

[Forward email](#)

 **SafeUnsubscribe®**

This email was sent to jeff@buildingscience.com by newsletter@buildingscience.com.
[Update Profile/Email Address](#) | Instant removal with [SafeUnsubscribe™](#) | [Privacy Policy](#).

Email Marketing by



Building Science Corporation | 30 Forest St | Somerville | MA | 02143