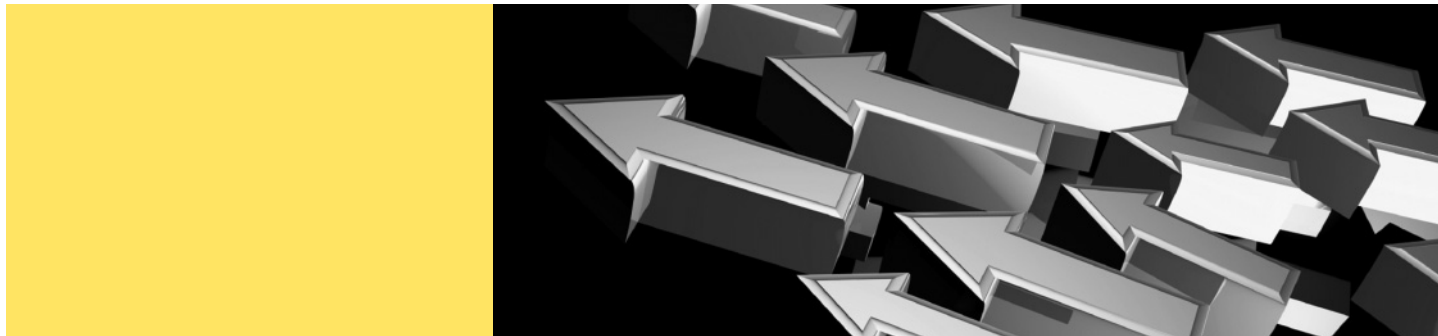


# BACK TO THE FUTURE?

by Ben Adams



Twenty six years ago in New Zealand, fresh out of college and gung ho to save the world, I began my career in energy efficiency. The “Ministry of Energy” had recently chartered a Conservation Team with the goal of “reducing the country’s dependence on foreign oil.” Our early initiatives included alternative fuels for vehicles, energy audits of homes and businesses, and consumer education. It all sounds very familiar doesn’t it?

A few years later I would find myself living in Philadelphia, managing a prescriptive low income weatherization program across the river in New Jersey. Then in 1990, attending my first Affordable Comfort conference just down the road, I would experience something of a revelation. Here was a whole community of professionals from around the country dedicated to promoting the effectiveness of energy efficiency improvements in homes. They were talking passionately about such concepts as moving from audits to action, using tools to identify opportunities and verify performance, the house as a system and implications for health and safety, energy modeling and rating systems, and how to measure impacts. Utility programs were giving away early generation compact fluorescent bulbs and we all agonized over how to connect with – and motivate – the consumer.

Then came the heady days of cheap gas and SUVs, budget surpluses, and of course, energy deregulation. With the exception of mandated low-income programs, many utility initiatives seemed to evaporate overnight – including those in ACI’s home state, Pennsylvania. Energy services shifted focus to quick fix technologies and “performance contracting”

in the commercial sector, or found a home under “marketing” within unregulated subsidiaries. For a while it seemed the residential customer had been relegated to insignificance – or at best to being a target for competing commodity offers.

And where was energy efficiency in the popular psyche? Let’s call it “old green,” still equated with geodesic domes and push mowers, do-it-yourself and off-the-grid, and perhaps above all, having to sacrifice comfort and convenience.

Through it all, the building science community continued to refine and rally around the mantra of “health and safety, comfort, durability and savings.” We understood that addressing energy efficiency was integral to improving those other characteristics of home performance that most motivated consumers. So in the thirteen years since an ACI conference was last held in Pennsylvania, how far have we come?

## National programs, national standards

Perhaps the most significant advance for the home performance industry over this period has been the emergence of national programs and standards. EPA’s adoption of the Home Energy Rating System as the basis for ENERGY STAR® new home qualification created a tipping point for both the program and energy ratings. The Residential Energy Services Network (RESNET) emerged with a broad membership base, a solid technical foundation and an open process for standard setting. It would go on to form a credible foundation for initiatives ranging from tax credits to carbon trading. Today RESNET represents 87 Provider members and over 3000 individual Raters<sup>1</sup>, and has supported the certification of 900,000<sup>2</sup>

new homes to the ENERGY STAR standard or higher.

Similarly, Home Performance with ENERGY STAR® has provided a framework for the comprehensive treatment of existing homes, and embraced Building Performance Institute (BPI) standards for contractor training and certification. Now RESNET and BPI are talking about how best to combine efforts to streamline the credentialing process to more effectively address both the new and existing homes markets. The number of states adopting the Home Performance model is growing each year, with nineteen<sup>3</sup> programs and hundreds of trained contractors now active in the marketplace. Of course, the magnitude of the challenge continues to dwarf the progress. With approximately 80%<sup>4</sup> of the nation’s housing stock built before the Energy Policy Act of 1992 (and the advent of model energy codes) we still need to figure out how to positively impact both energy and overall performance in really large numbers of homes.

Part of the much desired solution is an attempt to develop the elusive “meaningful energy audit” – one that drives and facilitates consumers to actually take effective energy saving actions. In the 1980s and 90s, thousands of well intentioned “home energy audits” were performed at low or no cost to the consumer. In retrospect, these often rudimentary walk-thru’s (visual only, no testing) simply became an end in themselves. Today the challenge is to tap into a similar number of households with a fee-based service that both delivers value and facilitates high impact actions without compromising the integrity of the whole house approach. At time of writing, the jury is still out on RESNET’s proposed tiered system of

home energy assessments as the platform for achieving this goal.

Finally, nationally branded standards for “green building” have emerged after, or in spite of, years of dedicated but laborious consensus building. USGBC’s LEED® for Homes program appears to have captured the high ground in the eyes of many practitioners by embracing ENERGY STAR® as its energy foundation. But NAHB’s Green Building Initiative stands poised to have significant market impact if the broader builder community lines up behind it. As we wait to see (at time of writing) how these two approaches will compliment or compete, let’s remember to say “thanks” to all those regional green building programs that nudged the process forward and kept us honest.

### Climate change changes the paradigm

Just two years ago, when it seemed as if complacency had settled in to stay, a funny thing happened: A movie of a PowerPoint presentation captured the hearts and minds of the very same public we had been struggling to appeal to all along. Apparently, “it’s the planet, stupid” after all. Or is it? Surveys still show that personal actions trail far behind both individual statements and media rhetoric. Focus group videos presented at USGBC’s GreenBuild last November showed average homeowners struggling to describe where their power comes from when they plug something into the wall, and pretty much failing altogether to make the connection with emissions production or climate change.

Nevertheless, “global warming” and the “new green” have provided the home performance industry with a context and a message more cohesive and powerful than any we have tried in the past. The “average consumer” may not understand exactly what it is, but they believe it’s a problem (images of Katrina and polar bears are apparently more convincing than nay-saying politicians), and “green” has provided a simple one-word solution they can rally around. Everyone can find something green they can act on, and there are plenty of early adopters out there willing to pave the way with some of the bigger steps. For the first time in a long time, the phone is beginning to ring.

The question is, who’s answering the call? Confusion, competing claims, and misleading promises risk tainting the marketplace with a backlash of cynicism. ACI and its constituency remain a bastion of the home performance message. Our

challenge is to effectively leverage the compelling aspects of the “green” label without compromising the essential aspects of delivery (technical integrity and measurable performance).

### A “Sputnik moment”

One of the most promising catalysts to future success may be the resurgence of state sponsored energy efficiency and renewable energy initiatives – this time framed in terms of significant reductions in green house gas emissions. Each day seems to bring new announcements of “20% by 2020,” “50 by 50,” and so on. Suddenly, everything is on the table again – from dramatic jumps in building codes to “green & white tags” (renewables and efficiency credits) to mandated utility programs for demand side reductions. Some have likened this surge of goal-setting from the nation’s bully-pulpits to the aftermath of the Sputnik awakening 50 years ago. But as many have pointed out, simply getting there from here may require that traditional metrics for cost effectiveness be substantially rethought. Even if we do every 7-year payback prescriptive measure imaginable we may still come up short. Because as we know, it’s the deep, comprehensive changes in fundamental design, installation practice, and verified performance that can deliver for the residential sector in the long run. On the other hand, dramatically increasing fuel costs (including the looming end to electric rate caps in Pennsylvania) are likely to drive both consumer demand and more favorable economics for both efficiency and renewables.

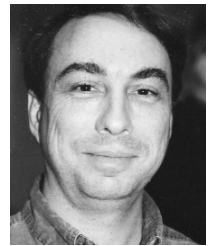
And so, after years of focusing on the drivers that we thought households cared about most (comfort, health & safety, etc.) while pulling energy savings along for the ride, we find ourselves once again faced with the tantalizing prospect that energy efficiency may be sexy after all. The challenge will be to move beyond efforts based solely on “widget-based” solutions (such as stand-alone equipment rebates, CFL handouts and “smart” meters) to a portfolio of comprehensive programs based on nationally recognized standards and approaches. Plus we’ll need some new out-of-the-box thinking as well (remember that “can’t get there from here” dilemma?).

### Pennsylvania at the crossroads

So which future will we be going back to in Pennsylvania? ACI’s home state is one of several that (at time of writing) are

considering how to move forward. Just nineteen states<sup>5</sup> have implemented a public benefits fund to finance efficiency initiatives, and only a subset of those reach significantly beyond low-income within the residential market. By the time you read this, we may have a better idea as to whether Pennsylvania will opt primarily for technology based solutions or for long term infrastructure development: trained home performance professionals, effective consumer education, and innovative financing tools. Any measure of movement along that road will be a positive reflection of the ACI community, its dedication to comprehensive solutions, and its awareness-building efforts over the last year.

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<sup>1</sup>RESNET Executive Director, Steve Baden

<sup>2</sup>Extrapolated from 725,000 reported in the ENERGY STAR 2006 Annual Report

<sup>3</sup>[http://energystar.gov/index.cfm?c=home\\_improvement.hm\\_impovement\\_hpwes\\_partners](http://energystar.gov/index.cfm?c=home_improvement.hm_impovement_hpwes_partners)

<sup>4</sup>American Housing Survey 2005 (<http://www.census.gov/hhes/www/housing/ahs/ahs.html>)

<sup>5</sup><http://dsire.org> (Database of State Incentives for Renewables & Efficiency)

ACI itself needs to consider how it can most effectively contribute to leading the charge forward. A number of new ideas have recently emerged: One is to focus the national conference on advanced solutions, while expanding the number and scope of regional conferences. Regional events can reach more of the people engaged in the practical side of implementation. Another is to launch a resource to combat some of the increasingly pervasive misinformation that’s out there – specifically a web site that might be called “EnergyFactCheck.org”. The name says it all.

Give these ideas some thought and suggest your own. Help shape the future we will move toward as part of the ACI community at <http://affordablecomfort.org/future>.