

November 20, 2007
Jeremy Hancher
ENVS 662-660
Project: Education

Energy Star: A Good Thing, but is it Kept on the “Down-Low”?

As energy costs soar to new heights and oil comes closer to the \$100 per barrel mark, I have been doing my best to weatherize my home in anticipation for the winter heating season. Having ventured across numerous do-it-yourself websites, I always seem to fall back upon on what I deem the most reliable website in becoming more energy efficient, www.energystar.gov.

Energy Star is a joint program of the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE) to help save money and protect the environment through energy efficient products and practices.¹ Focusing almost solely on residential and commercial sectors, Energy Star offers tools and resources for homeowners to help plan projects to reduce energy bills and improve comfort while providing businesses with a strategic energy management approach to increase their bottom line and their effects upon the environment. The program has formed partnerships with more than 9,000 public and private organizations including product manufacturers, home builders & home energy raters, utility entities, even lenders offering energy efficient mortgages.



Source: www.energystar.gov

The most recognizable feature of the Energy Star brand is the bright blue Energy Star label. Having adorned over 50 product categories, one can find this feature on most major appliances, office equipment, lighting, and home electronics. The Energy Star label has also been extended to cover new homes and commercial and industrial buildings.

While the notoriety for Energy Star is already “out there”, I could not help but wonder how the Energy Star program helps spread its ideas throughout the public and to encourage its implementation of principles (I will not take into account all of those recent Lowe’s or Home Depot commercials). This research paper seeks to analyze Energy Star in

its specific goal of helping entities achieve energy efficiency through its products and practices and will examine its benefits and shortcomings.

The Energy Star Website

As mentioned previously, I have always found a wealth of useful information on the Energy Star website. Since internet usage/research is so prevalent these days, one is far more likely to visit an organization’s website to find out what the organization is all about and to determine what its intended goals and message really is. Upon first visiting Energy Star’s website, you will notice that the site is broken down into four main subject areas: products, home improvement, buildings & plants, and new homes. The site is easy to navigate for a first-time user and one can probably get from “A to Z” with relatively no problem. There is no clear-cut section, or defined area, dedicated towards “education”, but when navigating through the site one cannot stop thinking that the site has been constructed towards educating the end user into finding out what energy efficiency really means.

Some particularly useful tools are the ones labeled “explore products” or “explore home improvement”. For example, when determining whether or not selecting an Energy Star-qualified dehumidifier would be beneficial, it is easily

Number of units	1		
Electric Rate (\$/MWh)	\$0.091		
Capacity (pints/day)	45-54		
	ENERGY STAR Qualified Unit	Conventional Unit	
Initial Cost per Unit (estimated retail price)	\$150	\$150	
Annual and Life Cycle Costs and Savings for 1 Dehumidifier(s)			
	1 ENERGY STAR Qualified Unit(s)	1 Conventional Unit(s)	Savings with ENERGY STAR
Annual Operating Costs*			
Energy cost	\$90	\$98	\$8
<i>Energy consumption (kWh)</i>	988	1,075	87
Maintenance cost	0	0	\$0
Total	\$90	\$98	\$8
Life Cycle Costs*			
Energy costs	\$845	\$920	\$75
<i>Energy consumption (kWh)</i>	11,853	12,901	1,048
Maintenance costs	\$0	\$0	\$0
Purchase price for 1 unit(s)	\$150	\$150	\$0
Total	\$995	\$1,070	\$75
	Simple payback of initial additional cost (years) [†]		0.0

An example of one of Energy Star’s product calculators.
Source: www.energystar.gov

understood that an Energy Star qualified model can save consumers roughly \$30 per year.² This is all spelled out in plain English and can be seen at the top of the page dedicated solely to dehumidifiers. Even more helpful may be the product list for consumers, or for business purposes, a savings calculator that actually shows and quantifies the savings of choosing an Energy Star dehumidifier over a conventional unit. While these calculators are prevalent for most, if not all, Energy Star products, they are widely interactive and can thus be viewed as an educational element within itself.

Other helpful educational tools found on the Energy Star website is the plethora of information with regard to tax credits under the 2005 energy bill and the relatively “do-it-yourself” home improvement section. Since many home improvement tax credits are eligible to consumers, Energy Star has the luxury of getting referrals to visit their website to find out more about which products or materials will qualify under the Energy Policy Act of 2005. Just yesterday, I received a piece of junk mail from a lending institution that was offering home equity loans to help with the purchasing of a new energy efficient HVAC system. Reading the fine print, I could not help but notice that the footnote on the postcard referred back to Energy Star’s website for more information on the tax credit. It is this kind of referral that does in fact make Energy Star a useful tool to educate otherwise unknowing consumers about the benefits in making their home or business more energy efficient.

Educating the Public

Energy Star attempts to provide easy access to consumer and business information. Like the website, there is a hotline that provides information directly to interested consumers about the more than 18,000 individual products across more than 1,250 manufacturers that qualify for the Energy Star.³ The EPA undertakes efforts to educate the public about the link between energy use and air emissions, raise awareness, and inform consumers of the hidden price tag of a product - the cost of energy to operate that product over its lifetime.

As mentioned previously, the EPA and DOE work with numerous organizations to provide clear, accurate information to consumers. Any retailer, manufacturer, utility company, or small business can join Energy Star to become a partner to help promote energy efficiency. Exemplary partner or leaders in promoting Energy Star are given special awards or recognition. The EPA is also reported to provide trainings and template materials to their partners for use in their own energy efficiency programs and outreach efforts.³ In a 2003 report by the EPA, the reasoning behind passing along the outreach efforts to the associated partners is due to the support being “particularly useful to those groups administering public dollars because it allows them to use their own funds to reach the businesses and individuals in their regions, not spend them on the creation of a regional infrastructure for energy efficiency.” So what is the EPA saying by this: that tax dollars are more effective in training the trainers than for the EPA to actually do the training itself?

Feedback from End-Users

Objectively speaking, it seems like there still is a larger educational component missing. Due to my background in the environmental field I have grown accustomed to EPA's focus with the Energy Star program, but I cannot help but wonder what other consumers think of the program.

One end user, in particular, joined Energy Star for small business and believes the Energy Star program has been an enormous help. Ed Pollitt, building manager of A.O.K. Auto Body Shop in Philadelphia explained, "Energy Star is really good about providing objective information...If you talk to a salesman, he's just going to try to sell you whatever he has in stock. But, Energy Star isn't selling anything—it's just going to get you good, solid information."⁴ Mr. Pollitt has installed energy efficient lighting fixtures with motion sensors, programmable thermostats, automatic timers on the water heaters and coffee pots, and has upgraded many of the facility's appliances to newer, more efficient models.

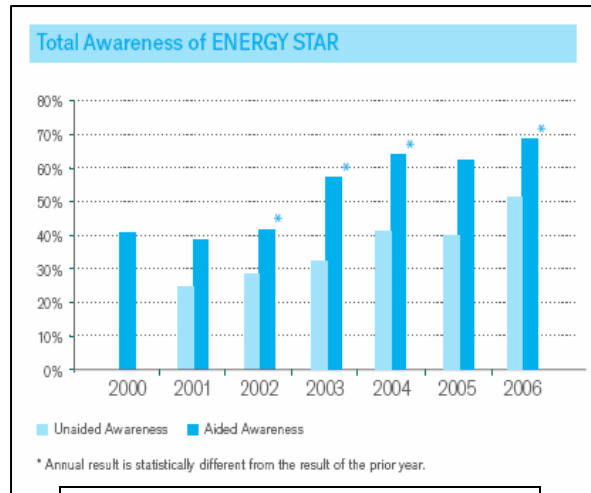
Speaking to Mr. Thomas Gibson, an energy consultant at the University of Pennsylvania, he reinforced an idea that the EPA relies too heavily on third parties to spread the word about Energy Star. Mr. Gibson explained, "I only know about Energy Star because I was forced to deal with it, but for any homeowner or business consumer there would never be any real reason why they should know about the program. I feel like EPA treats it like any other of their programs. They just provide pamphlets and brochures and never really help educate the end-user what it really means to go Energy Star and become more energy efficient."⁵

Others seem to agree with Mr. Gibson's take on Energy Star, although some may take it to more of an extreme. In a blog linked from a journal reference discovered from the EBSCO Megafire database,⁶ one particular Energy Star user noted: "Energy Star saving crap just makes appliances last a third as long as they used to. So, you can save energy, but not money."⁷ Another user chimed in using the same mentality: "I sell appliances for a living, and E Star is crap...Take into account that E Star rated appliances for ridiculous usage rates (12 loads a week for laundry) and you realize that E Star is a sham that is doing nothing but making appliance companies lots of money."⁷ It is this kind of thinking that makes one wonder if Energy Star is really doing a good job in educating the public and spreading the word out. Perhaps some consumers have this kind of thought process because the EPA has

decided to rely on others to perform the outreach and marketing efforts for the Energy Star program.

Benefits to the Environment and the Economy

While it is rather certain to say that long and drawn-out arguments can be endured on Energy Star's real intent and its effectiveness, the real effects should be construed after considering Energy Star's results. In 2006, with the help of Energy Star, the United States prevented 37 million metric tons of greenhouse gas emissions alone equaling the annual emissions of 25 million vehicles⁸. It also saved more than 170 billion kilowatt hours or almost 5% of total



Above chart source:
http://www.energystar.gov/ia/partners/downloads/ENERGY_STARBndManf508.pdf

2006 electricity demand. In addition, Energy Star helped avoid over 35,000 megawatts of peak power, equivalent to the generation capacity of more than 70 new power plants. These savings also allowed Americans to save more than \$14 billion on their utility bills. It sounds like “the word” is definitely out.

Recommendations & Conclusions

It is my belief that the EPA and DOE should focus more on educating the public firsthand, instead of relying too heavily on their partners to help spread the word and move the Energy Star brand further along. While I personally agree with those end users and consumers that think Energy Star is an excellent program, I admit that when I first heard about the program that I thought that Energy Star products would be inferior to similar products on the market. How I came to change my viewpoint of the program is an interesting one. Simply put, I became more in tune and more familiar with the benefits of Energy Star by constant web surfing and navigation on the Energy Star website. I plugged some numbers into their calculators and figured out some cost saving analyses for various scenarios. What you could say is that I educated myself after some initial self-awareness of the program.

I think this is what Energy Star has set out to do. For sake of keeping political arguments out of this, it is safe to assume that at least the EPA, and perhaps the DOE, has

experienced budget cuts in recent years. This has kept their programs under strict internal monitoring and has forced them to go for the biggest bang for the buck. Obviously, the educational component is not attributed to that “bang”. Believe me, I would like to see nothing more than for the EPA and the DOE to hold public training events to teach and inform the interested and curious public about the benefits of Energy Star. However, we cannot kid ourselves in ever believing that the federal government will ever do any handholding to educate individual consumers and the business community about the basics of achieving energy efficiency. Therefore, in order for us to gain the knowledge and power in strengthening the country’s energy efficiency we must fend for ourselves and learn in light of a better environment and a stronger economy.

Sources:

¹ http://www.energystar.gov/index.cfm?c=about.ab_index. Energy Star. Accessed November 18, 2007.

² http://www.energystar.gov/index.cfm?c=dehumid.pr_dehumidifiers. Energy Star. Accessed November 20, 2007.

³ U.S. EPA. 2003. "Energy Star- The Power to Protect the Environment Through Energy Efficiency." July. Available online at http://www.energystar.gov/ia/partners/downloads/energy_star_report_aug_2003.pdf.

⁴ http://www.greenerbuildings.com/case_studies_detail.cfm?LinkAdvID=68995&print=true. Greener Buildings. Accessed November 19, 2007.

⁵ Personal Interview on November 20, 2007 with Mr. Thomas Gibson, Energy Consultant, Pennsylvania Small Business Development Center at the University of Pennsylvania.

⁶ Pash, Adam. "*Energy Conservation: Save Money and Energy with Energy Star @ Home.*" Gawker: Lifehacker. August 14, 2007.

⁷ <http://lifehacker.com/software/energy-conservation/save-money-and-energy-with-energy-star--home-289418.php>. Accessed November 18, 2007.

⁸ U.S. EPA. 2007. "ENERGY STAR and Other Climate Protection Partnerships 2006 Annual Report." September. Available online at http://www.energystar.gov/index.cfm?c=news.nr_news#report.