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Biomass: A Convenient Solution to Global Warming

Date/Time: Thursday, June 19, 2008, 11:45 AM - 1:00 PM

Speaker: Brett Hulsey, MNS, President, Better Environmental Solutions

Location: Rocky Rococo's Pizza, 7952 Tree Lane (Madison Beltline Hwy. at Mineral Pt. Rd.), 608.829.1444

Menu: Pizza buffet, salad and soft drinks (cost \$10.00, free for UW-Madison student members)

RSVP: by June 16th to Shazia Ahsan via e-mail (sahsan@ieee.org) or call 906.370.2958

Non-member guests are always welcome!

Brett is President and Founder of Better Environmental Solutions, a consulting firm promoting practical solutions to save lives, jobs and money. He authored "Ethanol: A Convenient Solution to an Inconvenient Truth" for the American Coalition for Ethanol, "Cellulose Prairie: Biomass Potential in Wisconsin and the Midwest" for the Governors' Ethanol Coalition, "Clearing the Air with Ethanol" for the Corn Growers, "Saving Lives, Jobs and Money" and "Highway Health Hazards" for the Sierra Club, and more than 20 reports on sustainable agriculture, clean air, water, and the environment.



He has been the Dane County Board Supervisor since 1998 and chair of the Dane County Lakes and Watersheds Commission and the Personnel and Finance Committee. He serves on the National Association of Counties Environment, Energy and Land Use Steering Committee where he authored policies to fund more farm conservation practices, more biofuels, restore wetlands, and call for immediate action to reduce global warming air pollution.

Brett has a Masters in Natural Science from the University of Oklahoma and a B.A. in Political Economy from Middlebury College.

Marketing New Technologies to Green Consumers (and Beyond)

By John R. Platt

Greener light bulbs. Greener cars. Greener clothing. Greener electronics. It seems like every company in the world is trying to make itself or its existing products look greener these days. But marketing slight changes to existing products is easy. What will these same companies do to market their green ideas when something truly new comes along?

Let's take a look at the now-ubiquitous compact fluorescent bulb. Just a few years ago, compact fluorescent lamps (CFLs) were something different, new, unusual, and hard to explain. Most people hadn't heard of them, and many who had heard of them were resistant to the idea of replacing their old incandescent light bulbs. But today, CFLs are for sale and being used almost everywhere. The message has gotten through.

So how did this change come about? And how can we learn from it to market the next wave of green ideas?

Diffusion of Innovations

It turns out that "green" or environmentally conscious consumers are just like regular technology consumers. There are certain types of people who will grab on to an environmentally friendly idea early on, while others will follow soon after as the technology becomes more prevalent and less buggy. The pattern follows a familiar one: Everett Rogers' 1962 theory, Diffusion of Innovations. Rogers' theory charts adopters of any new innovation along a bell curve. Innovators are the first to grab onto new ideas, but represent the smallest part of the eventual market (just 2.5 percent). Early adopters will try a technology next (representing 13.5 percent of the market), then the early majority (34 percent), followed by the late majority (another 34 percent), and finally, the slowest to adopt to new technologies, the laggards (16 percent). According to Rogers, an individual's placement along that bell curve depends upon many factors, including their interest, their evaluation of a technology, trying things out, and, perhaps most importantly for this discussion, their awareness.

Green Innovators

Like audiophiles constantly on a quest for the latest stereo components, innovator and early-adopter green consumers are always looking for — and ready to try — new, green devices and technologies. They aren't as concerned about cost, either. A green device might be more expensive than a traditional alternative, but innovators will adopt it early, because they are embracing an ideal and making a statement.

Look at early sales of hybrid cars as an example. The earliest hybrids were more expensive and involved less proven technologies. But the environmental movement embraced them as an alternative to cars powered by fossil fuels. While hybrids may not be the ultimate killer app for gas-guzzlers, auto makers could depend upon green innovators and early adopters to start the market and provide feedback, allowing them to work out some kinks in their first wave of vehicles (and probably to broaden the market for fuel-cell vehicles further down the line).

Other companies are following this model. A company called Reluminati recently introduced a 2,000-pound solar generator called the PowerCube 600. Priced at \$25,000, this isn't the device for everyone looking to get into solar power. But for people determined to cut their

ties to the power grid, the PowerCube is an attractive choice, no matter what the cost.

The Green Majority

Let's go back to the hybrid car. When they were first introduced, hybrids were more expensive than comparably sized vehicles. But as the market became broader and more companies offered a wider variety of hybrids, prices dropped enough that they became more attractive to a wider variety of people, especially in the wake of rising gas prices.

Similarly, not every solar device costs \$25,000, like Reluminati's PowerCube. Better Energy Solutions has started marketing the SOLIO, a \$100 solar charger that can power cell phones and other hand-held devices. By creating a flexible, portable, less expensive device, BES has broadened the market and reached beyond the innovators into the early majority.

As a technology reaches the majority, or mainstream, its message must go beyond the initial message. It won't be enough to point out that a technology is more environmentally friendly. You'll also need to tout its other benefits: reliability, cost savings, technological superiority, and quality, among other unique selling points.

You may also need to break through some skepticism and eventually lower your prices. Those are the two biggest barriers between the early majority and the late majority, according to Rogers. The late majority holds on to traditions for a very long time — they were the people still playing music cassettes a few years ago — but will eventually come along when the time is right.

The Laggards

Of course, even when a technology hits the majority, some people just won't go near it. CFLs still face major resistance from people who love their incandescent bulbs; some people refuse to go to MP3s for their music needs, and a few die-hards still swear by Beta for all of their video needs. But eventually, if it's good enough, a new technology will supplant the old, and then even the laggards need to come along or be left behind.

Of course, we haven't seen many green products get that far in the market, but there's still time for the next big innovation to do just that.

John Platt is a marketing consultant and journalist living in Maine. He can be found online at www.john-platt.com. Comments may be submitted to todaysengineer@ieee.org.

Opinions expressed are the author's.

Call for Fellow Nominations

Nominations are being accepted for the IEEE Fellows class of 2010. The rank of IEEE Fellow is the institute's highest member grade, bestowed on an IEEE Senior Member who has had an extraordinary record of accomplishments in any of the IEEE fields of interest. The deadline for nominations is 1 March 2009.

Senior Members can be nominated in one of four categories: application engineer/practitioner, research engineer/scientist, educator, or technical leader.

The Fellows Web pages contain information regarding the history of the IEEE Fellows program, the nomination process, access to the Fellows Nomination Kit, lists of Fellows who are eligible to be references

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and more about the Fellow program. Please visit the Fellows website at <http://www.ieee.org/fellows>.

IEEE Launches MemberNet Online Directory

The IEEE has launched an online member directory designed to encourage peer-to-peer networking within IEEE membership. memberNet is the first step in a series of next-generation capabilities that will encourage virtual collaborations between members with similar technical interests, regardless of geography. While the basic member profile in memberNet contains every member's name and membership grade, each member can indicate by check mark what additional information they would like to also have appear. These may include technical interests, local Section, or IEEE Society affiliation. The memberNet directory, and its opt-in management, is accessible from myIEEE, at <http://www.ieee.org/myieee>. For more information about IEEE memberNet, visit <http://www.ieee.org/membernet>.

Free EMC Layout and Design Software to solve even the most complex EMC issues

As part of the curriculum in Donald Sweeney and Roger Swanberg's EMC by Your Design Seminar/Workshop students will use, and then take home free-of-charge, a copy of the proprietary EMC Layout and Design software program created by the instructors. This proven software package addresses design considerations from component level, through circuit boards, to enclosure level, including cabling and interconnects and enhances the theories presented both in the class and in the Mardiguian textbook. The four-day seminar/workshop is presented in a practical, hands-on style providing the

step-by-step design process to avoid EMC problems. After the workshop attendees can put their acquired knowledge to immediate use in an optional, free, 45-minute design evaluation of their own product.

To register call Carol at 847-537-6400 or email her at cgorowski@dlsemc.com. For more information click on <http://www.dlsemc.com/class301.htm>.

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IEEE Power Engineering Society Officially Changes Name To IEEE Power & Energy Society

After a final vote from the Society membership, the IEEE Power Engineering Society has officially changed its name to the IEEE Power & Energy Society (PES), effective 22 April. In an announcement at the 2008 IEEE PES Transmission and Distribution Conference in Chicago, Ill., 2008 PES President Wanda Reder outlined the benefits of the name change:

- more relevant to current member interests and aligns with global needs;
- positions the Society for increased interaction and external collaboration;
- improves the Society's external image;
- provides framework for embracing emerging technologies;
- appeals to "Societal" interests of potential members.

The name change also:

- maintains the strong IEEE PES acronym and identity;
- aligns with the POWER AND ENERGY Magazine title and;
- better reflects the existing mission, scope, field of interest.

The Society's mission will remain "to be the leading provider of scientific and engineering information on electric power and energy for the betterment of society and the preferred professional development source for [our] members." "The IEEE PES is the oldest IEEE Society, and will celebrate its 125TH anniversary in 2009, along with the IEEE itself. For full coverage of the PES Transmission and Distribution conference, read the show's official blog at <http://ieeepes-td.com/>.



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Our members have professional interests in computers, power engineering, signal processing, communications, industry applications and a number of other technical fields.

For more information, contact Mitch Bradt at 608.263.1085 or bradt@wisc.edu.

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