Exclusive News from the Edge of Progress

December 2011

GAEA
GLOBAL ALTERNATIVE ENERGY ALLIANCE

Sunny Side UPDATE

Project Status, Funding, Special Events, Technology Advancements, and How You Can Remain Involved

INSIDE THIS ISSUE:

What can GAEA provide for our Youth?

Students at Rotary UN Day

GAEA provides a unique opportunity that few other international community projects do... a chance to really engage our youth and to give them the opportunity to make a very real and important contribution.

In Rotary Clubs and other similar service organizations, young members can feel intimidated by what they experience. Like when they learn of the level of monetary gifts by some, and are perhaps not yet able to donate at the same level.

What we prefer to focus on goes beyond money. We welcome our young members and encourage them to find ways to help create awareness and excitement, which money cannot buy.

Are your young members creating something extraordinary for GAEA? Let us know, so we can include your story right here in the newsletter!

Nanotechnology for More than Just Airplanes

How many different products would you need if you wanted to repel water, prevent icing, stop corrosion, and make an aircraft self-cleaning? Soon, the answer could be just one: NeverWet. But don't rush to the store yet; retail spray-can products aren't expected to be available until mid-2012.

These seemingly magic coatings are the result of three years of work by a dozen scientists working for Ross Nanotechnology, a relatively new division of the 50-year-old Ross Technology Corporation.

Ross Technology, which sells steel products, was looking for a way to reduce corrosion on its products. When it couldn't find a suitable coating, Ross decided to invent its own and the Nanotechnology division was formed. The resulting product, NeverWet, is a silicon-based coating with seemingly endless consumer and industrial applications.

When a NeverWet coating is applied to the inside of tubing, liquid travels through it faster. That's because instead of rubbing against the tubing, the fluid rubs against air. Thus liquids move faster and less energy is required to pump them.

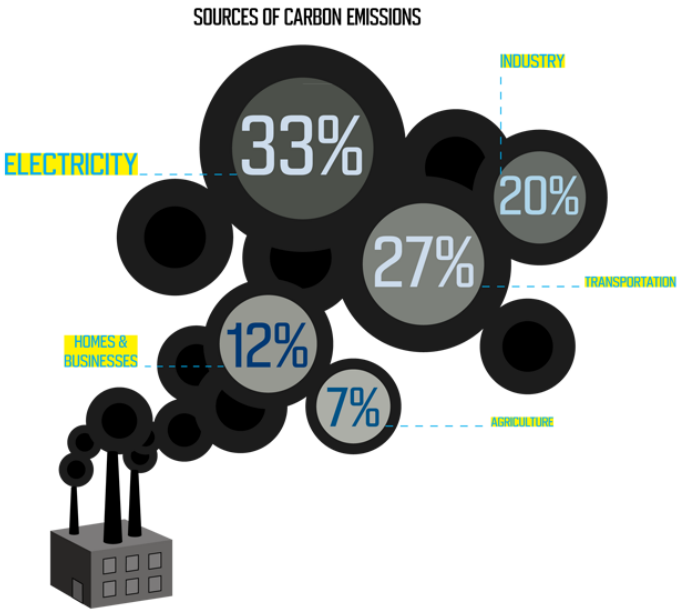
The company's first product was the Clear-n-Clean plunger for toilet bowls. Because of its NeverWet coating, the plunger remains dry, greatly reducing any transfer of water or bacteria from the toilet bowl.

Getting back to the aviation world, imagine a clear spray that could be applied to aircraft wings to provide anti-icing capability and to simplify cleaning of bugs and dirt. Ross claims that NeverWet lasts for "thousands of rubs," meaning that it won't come off quickly in the rain or when you wipe the plane.

Source: EAA.org

Ideas to Make America's Energy Supply Safer and Cleaner and Virtually Inexhaustible

We are not about to run out of energy: We have enough fossil fuels on the planet to power civilization for another half century or more. It is more honest to say that we are in the midst of an energy transition, a change in the kinds of energy we use and the ways we produce them. If we continue to rely on coal to keep the lights burning and gasoline to keep our cars running, we are bound to pay a heavy price. Imported oil accounts for 42% of our trade imbalance. Fossil fuels collectively produce 95% of the carbon emissions that are heating the planet. And the need for reliable sources of energy becomes more evident with every geopolitical tremor.



"At first it may seem counterintuitive that making cars electric will help us limit greenhouse gases," Stein says. "But in fact we can reduce carbon emissions by adopting vehicle electrification."

Bold Idea: Reengineer the grid around electric vehicles. The first mainstream plug-in hybrids and fully electric vehicles (EVs) are just now hitting the market, and while initial sales have been slow, the Department of Energy predicts there will be 1.2 million of them on the road by 2015. With the EV revolution in full swing, University of Michigan mechanical engineer Jeffrey Stein says the time is now to integrate the electrical grid with the transportation infrastructure and ensure the country's carbon emissions drop as a result of the introduction of electric cars.

Transportation is responsible for 27 percent of America's carbon emissions. Power companies' heavy reliance on coal-fired plants means that electricity generation accounts for even more, about 33 percent. "At first it may seem counterintuitive that making cars electric will help us limit greenhouse gases," Stein says. "But in fact we can reduce carbon emissions by adopting vehicle electrification." The keys will be limiting the need for new power plants and engineering the electrical grid to increase the use of clean energy sources.

Designers of both the electrical grid and future EVs will have to take into account when and how owners charge their vehicles. "Eighty percent of charging is expected to take place at home or the workplace," says Genevieve Cullen, vice president of the Electric Drive Transportation Association. Influencing when people recharge their cars could have huge implications for the effect of EVs on the environment.

During off-peak hours, electric companies rely on the base load power generated in large part by carbon-neutral nuclear power plants; when demand rises during peak hours, they bring dirty, coal-fired plants online to meet increased need. "Utilities need to give electric vehicle owners preferential pricing for charging during off-peak hours, when energy is cleaner," Stein says. The other half of the equation, he notes, is engineering a smart power grid that can distribute renewable energy, from solar or wind, for instance, to charge fleets of EVs. "If a power company has the ability to selectively charge groups of vehicles based on when renewable energy resources are available," he says, "it makes electric vehicles useful not only for reducing petroleum consumption but for reducing the amount of greenhouse gases overall that we produce." ---except from Discover magazine, Nov. 2011

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Clean Energy Business Competition

One of the most important things we can do to provide for a more sustainable future for our children and grandchildren is find new ways to unlock our ingenuity. Across the planet, creative minds are generating ideas that will make our lives better – and save energy – and they're translating them into action through entrepreneurship. By cultivating the best clean energy ideas and working to move them from paper to prototype to commercial success, entrepreneurs are the engine driving us to a more secure energy future.

DOE's Office of Energy Efficiency and Renewable Energy (EERE) plays an important role in this process by investing in the development and commercialization of clean energy technologies that strengthen the economy, protect the environment, and reduce America's dependence on foreign oil.

One of the ways EERE is opening doors for America's young entrepreneurs is through the National Clean Energy Business Plan Competition (NCEBPC). Announced in late September, the challenge funds six regional collegiate business competitions that are inspiring young entrepreneurs to found innovative, clean energy companies. These competitions encourage students from across the country to develop successful business plans and join a new generation of American clean energy leaders.

The regional competitions will be completed by May 1, 2012. Panels of expert judges will select a winning team from each region to advance to the finals. The six regional winners will each receive $100,000 in DOE prize money and a chance to compete for a National Grand Prize at a competition held at the Department of Energy in Washington, D.C. in early summer 2012.

For more: https://eere-exchange.energy.gov/

Eco-minded 4H Club Programs

4-H's programs provide young people first-hand experience in utilizing alternative energy, conserving energy and learning how to limit humanity's impact on our environment. Completing programs such as 4-H_2Online, which teaches water conservation, and the Power of the Wind, which teaches youth how to take advantage of wind energy, allows young people an entry point into these important conversations. With this knowledge, 4-H'ers can interact with their community's decision-makers and help stimulate environmentally conscious policy.

Beginning with students in middle school, working through high schools, and then into family units, the 4-H_2Online program systematically leads members along the water cycle via engaging projects that teach conservation, options for cleaning the water supply and how to help save water.

Next-generation wind turbines are popping up all over the world, and the technology can seem out of the reach of middle-school-aged students. But when placed on a smaller scale via the Power of the Wind program, young people are challenged to create devices that use wind power to accomplish various tasks.

In one project, 4-H'ers use a step-by-step process to learn about wind power and then brainstorm, design and ultimately create a pinwheel capable of lifting a small load.

With this knowledge, 4-H'ers can interact with their community's decision-makers and help stimulate environmentally conscious policy.

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The Mission
To promote the adoption of new sources of energy and foster their success stories in every community with the help of people just like you! Our aim is to serve as a model for all communities to create self-sustaining alternative energy projects.

This is where you come in. In order to make these exciting projects a reality, we need your support. There are a number of ways you can help, so click around our website to learn more about alternative energy, our current projects, and how you can help.

Thanks for your support of our efforts to help America and the world to be clean, be green, and be free.

GAEA approves Alternative Energy Project Fairs

Energy Project Fairs are regional events hosted by supporting clubs or groups to encourage collaboration for GAEA projects and to educate visitors about alternative energy and energy conservation.

These events provide an opportunity for each club to exhibit their own GAEA project and for visitors to meet the project coordinators. Attendees can proactively share and discuss ideas and establish partnerships.

The duration of the fair is decided by the hosting club and is based upon what their goals are for the event.

Why should a club host an energy project fair? Hosting a project fair is a great way to meet other members and to publicly highlight and promote their club efforts for the GAEA project. Inviting others to view the exhibits encourages discussions that can build lifetime friendships and increase the likelihood that the GAEA project will continue to gain support.

Why attend a GAEA energy project fair? If your club is interested in supporting a GAEA service project, then attending a project fair is a great place to learn all the details and start building relationships. As an attendee you will have the chance to visit with the members who developed the GAEA project and you can ensure that your own GAEA project is a successful experience for your club.

For more about hosting your own energy project fair, contact us today: info@GlobalAltEnergy.org

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