



Municipalities and Government Buildings (post offices, transportation DOT, City Hall's and Water Treatment Plants)



We can help City Managers
and Purchasing Agents decide
where to spend their American
Recovery and Reinvestment
Act money wisely for their
Renewable (Solar/Wind)
Energy Projects.

Coulomb Technologies Announces Plant a Station Campaign

Coulomb Technologies a leader in electric vehicle (EV) charging station infrastructure today announced "Plant a Station" campaign. Individuals and businesses anticipating the arrival of electric vehicles, Coulomb's website has an easy way for consumers and businesses to suggest locations for ChargePoint® Networked Charging Stations in their community. Simply point a browser to mychargepoint.net, click on "Request a Station", enter an address, and plant a red icon on the location where you would like to see a public charging station. Coulomb is working closely with state and local governments as well as businesses and utilities to build the necessary infrastructure to best serve the demand EV charging.

Additionally, Coulomb announced that their newly released [ChargePoint App for the iPhone and iTouch](#) has reached nearly 30,000 downloads. The free App locates ChargePoint Networked Charging Stations for EV anywhere in North America, and displays in real time if a charging station is currently available or in use. With the ChargePoint App, drivers can start and stop charging sessions, be notified when their vehicle is fully charged, and get directions to stations.

Events and Opportunities

Much of the past couple of months have seen HEA exhibiting and traveling to support our dealers. Small exhibits and large exhibits combined with conferences. We're spending more time in front of city councils and zoning commissions. And, of course, whenever asked, your HEA home team has helped dealers with siting, configurations, presentations, and even installation support.

Many of you have seen increased business, and abundant inquiries leading to sales opportunities. Everyone seems busy, but are you realizing the income you expected from selling and installing HEA products? Some are, some are not. This is not the easiest business to glean success from, far from it. However, if you plan, execute, and follow-up, you'll see results (success!).

Over time we've learned that selling renewable energy products requires more knowledge than most other businesses. We've learned that being inclusive of product life adds to ROI, adds to property value increases, and digging out the incentives that don't always just show up will lead to a better understanding of ROI and value adds for the customer. And, this, we've found, makes for happy customers.

If your market reach is filled with communities with antiquated codes and ordinances, move your efforts outside the city limits. Don't give up on the urban areas, we are seeing city after city rethinking their policies, and new, more reasonable restrictions taking the place of old or uneducated thinking.

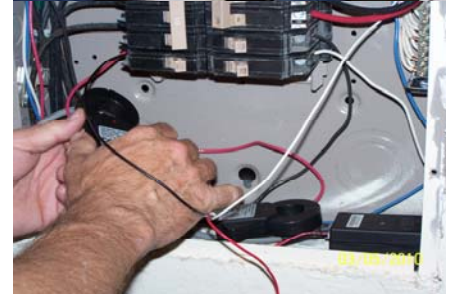
Many of our dealers have taken the initiative to present good policy to their city councils with great success. Four HEA dealers have done so in just the past month. They've achieved improved height restrictions, reduced unreasonable drop zones and minimum lot size requirements, and have provided their local authorities with the proposition to bring quality renewable energy standards to their communities.

Increased property values, community growth, new jobs and other business opportunities are the result. The momentum is solidly in place, but each of us needs to be part of the solution, the opportunity, the growth initiative.

If your business is slow, ask for our help. If business is good, let us help you make it better. Return to HEA for new and improved training (free to certified card holders). Use our configuration tools, ask our advice. We look forward to hearing from you.

Robert S. Thompson
CEO

HEA Certification Training Expands, and improves in all areas. Still held the second Monday-Wednesday of each month, but with more content, more configuration, siting, incentive, ROI and Sales/Marketing Data. All existing Dealers/Installers are invited to join us for the session of their choice at no course cost in a future month. Contact Manny or Vern to reserve a seat. The manual now exceeds 800 pages, plus a data reference set on CD, plus online reviews and testing. Come spend a day or more with us expanding your knowledge base.





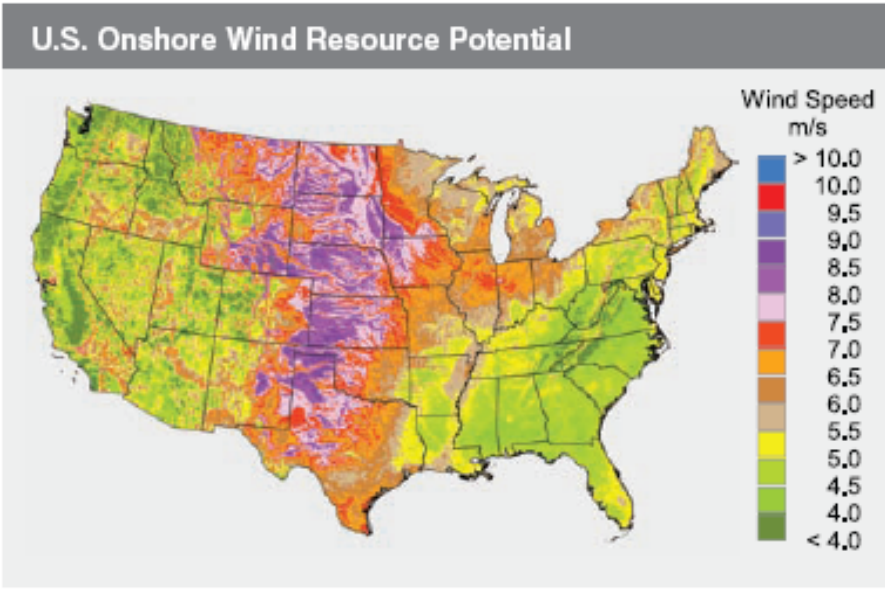
Intraline has erected it's first V100 Energy Ball overlooking San Francisco Bay.



Northwest Windpower erects V100 Energy Ball at the Aldersheim Wilderness Lodge north of Juneau, Alaska. A V200 will be added to this off-grid location soon.



The rush in on to build Electric Vehicle charging infrastructure in all US markets. Call the HEA Fort Worth office for additional information. and pricing.



Data Source: AWS Truewind, LLC, for windNavigator® for the National Renewable Energy Laboratory

The Energy Ball powers Nascar #28 at Charlotte Motor Speedway. Left to right: Jon Trice, Brian Trice and Driver Kenny Wallace



Energy Efficiency and Conservation Block Grant (EECBG) Program

Funding for the [EECBG Program](#) under the Recovery Act totals \$3.2 billion. Of this amount, approximately \$2.7 billion will be awarded through formula grants. SECO will receive approximately \$45 million under the EECBG to administer to cities and counties not receiving direct EECBG allocations from the U.S. Department of Energy (DOE). See if your city or county received a [direct EECBG allocation](#).

Federal Amount Available: **\$3.2 billion, nationally**

Direct Allocations to "entitlement" Cities and Counties: **\$163,121,800 (Cities over 35,000/Counties over 200,000)**

SECO Allocated: **\$45,638,100 (Cities under 35,000/Counties under 200,000)**





Established in 1974, the Solar Energy Industries Association is the national trade association of the solar energy industry. As the voice of the industry, SEIA works to make solar a mainstream and significant energy source by expanding markets, removing market barriers, strengthening the industry and educating the public on the benefits of solar energy.

Intraline exhibits HEA product line at San Francisco Chamber in late May.



Capacity Factor

The amount of energy a device generates in a year divided by the amount it could generate, based on it running at full capacity the entire time.

Sizing Small Wind Turbines

To help you determine what size turbine you'll need, first establish an energy budget. Because energy efficiency is usually less expensive than energy production, [reducing your home's electricity use](#) will probably be more cost effective and will reduce the size of the wind turbine you need.

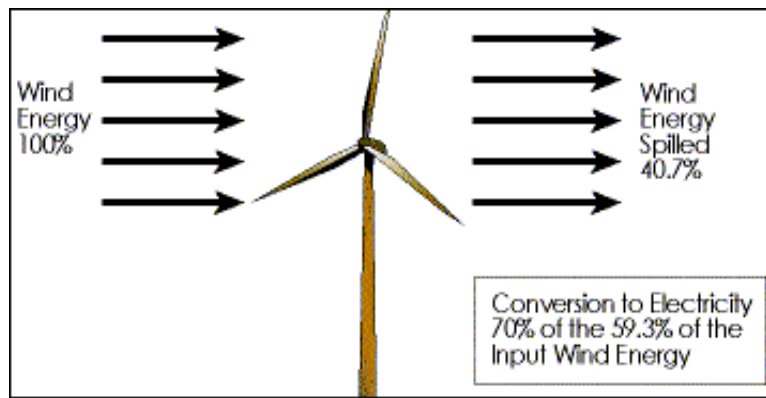
A typical home uses approximately 9400 kilowatt-hours of electricity per year (about 780 kWh per month).

The height of a wind turbine's [tower](#) also affects how much electricity the turbine will generate.

Understanding the Betz Limit and how it affects wind turbines

Albert Betz was a German physicist who in 1919 concluded that no wind turbine can convert more than 16/27 (59.3%) of the kinetic energy of the wind into mechanical energy turning a rotor. To this day this is known as the **Betz Limit** or **Betz' Law**. This limit has nothing to do with inefficiencies in the generator, but in the very nature of wind turbines themselves.

Wind turbines extract energy by slowing down the wind. For a wind turbine to be 100% efficient it would need to stop 100% of the wind - but then the rotor would have to be a solid disk and it would not turn and no kinetic energy would be converted. On the other extreme, if you had a wind turbine with just one rotor blade, most of the wind passing through the area swept by the turbine blade would miss the blade completely and so the kinetic energy would be kept by the wind.

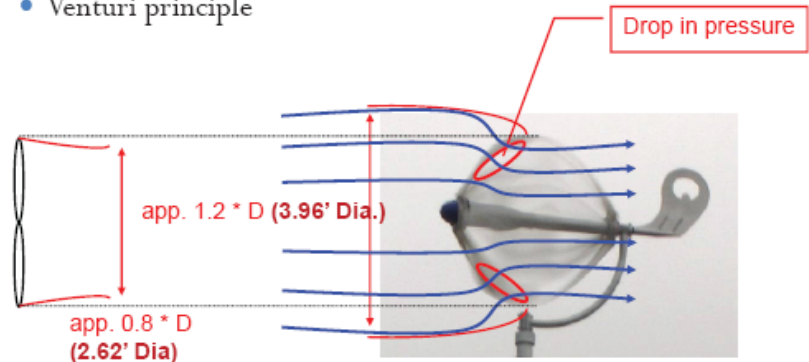


Real World Wind Turbine Power Efficiencies

The theoretical maximum strength and durability in particular - the real world limit is well below the *Betz Limit* with values of 0.35-0.45 common even in the best designed wind turbines. By the time you take into account other inefficiencies in a complete wind turbine system - e.g. the generator, bearings, power transmission and so on - only 10-30% of the power of the wind is ever actually converted into usable electricity. (see the graphic above from the Iowa Energy Center, USA.) **maximum power efficiency** of any design of wind turbine is 0.59 (i.e. no more than 59% of the

The Energy Ball in operation

- Venturi principle





NWWP erects another V200 on June 8th in a Seattle, Washington suburb.

Looking for up-to-date information on wind issues?
Try AWEA's fact sheets

AWEA has compiled state-of-the-art information on a wide range of issues in its fact sheets. Here are some representative titles: Wind Power and Energy Storage; Wind Power and U.S. Energy Subsidies; Wind Energy and Wildlife; Industry Rankings; and more. You can download selections from this wealth of information by going to www.awea.org and clicking on Publications, then Fact Sheets.

NEWS FROM DSIRE – Visit
www.dsireusa.org regularly

ARIZONA - Production Tax Credit Dangled for New Renewables

GEORGIA - PACE Legislation Enacted

MARYLAND - New Law Advances Solar RPS Requirements

MARYLAND - Net Metering Expanded to Fuel Cells

MARYLAND - Clean Energy Production Tax Credit Renewed, Revised

MINNESOTA - Residential Wind Rebates on Tap

NORTH CAROLINA - Second Batch of Rebates for Efficient Appliances Unveiled

OREGON - New Business Energy Tax Credit Rules Issued

WASHINGTON - Franklin County PUD Discontinues Loan Programs

WISCONSIN - PACE Financing Law Enhanced

WISCONSIN - RPS Resource Eligibility Broadened

A FEW EVENTS

June 8

NYC Solar Summit, John Jay College/CUNY, NYC

June 14

Fundamentals of Wind Energy and Small Wind Systems Workshop, Stevens Point, WI

June 15-16

Small Wind Energy Conference, Stevens Point, WI

June 18-20

MREA Energy Fair, Custer, WI

June 23-24

Advanced PV installer course, Onondaga Community College, Syracuse, NY

July 9

NABCEP deadline for applications for 9/11/10 exams

September 11

NABCEP PV, solar thermal, small wind certifying exams

October 11

IREC Annual Meeting, Los Angeles, CA

October 12-14

Solar Power International 2010, Los Angeles, CA

October 19-22

Renewable Energy Markets, Portland, OR

McKinney City Council and the McKinney Fire Department cordially invite you to attend the

FIRE STATION #8 DEDICATION CEREMONY

Sat., June 26, 2010 • 9:30 a.m.
3445 Alma Rd. • McKinney

For information:
Asst. Fire Chief Frank Roma
972-547-2851

www.mckinneytexas.org





The largest show of its kind on Planet Earth. Visitors from around the world; educators, scientists, manufacturers, distributors, and entrepreneurs. An absolute wonderland of wind energy, of technology, of opportunities, and HEA was right in the middle of it all. On Monday (the first full day of the conference) our exhibit was manned by seven HEA staff, and at times our audience was four deep, waiting for an opportunity to speak with us. Over 20,000 attendees came from every sector of the industry. Over 1,400 companies exhibited at WIND 2010. Thanks to Manny, Katie, Jon and Brian, for organizing and putting our show together (our displays looked great); thanks to Bob, Dave, Michael, Joe Long, Manny, Jon and Brian for their sales acumen; and to Joe Huff for his support and logistics expertise. It will take a while to sort out the leads and inquiries, but we'll get it done. We're a pretty exceptional team. And special thanks to all of our dealers/distributors, vendors and supporters who went out of their way to come by and wish us well, or just to say hello. I think everyone will agree; this was a big event, we put our best foot forward. and made a very good presentation of HEA and its excellent products. You can all be proud of your HEA home team.



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Visitors from near and far

Best spot in the house

Everyone brought a turbine

Manny, Mike & Bob

Texas always shows up

Greeting early visitors

International in scope

A lot to take in

Offshore and Onshore

No end to wind options

Utility scale equipment

All put away, ready to ship