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ASPIRE CLEAN TECH COMMUNICATIONS, INC.

Aspire Week in Review – Week Ended January 22, 2010

Copenhagen Discord

So far, less than two weeks prior to the date set where more than 190 nations are expected to say whether they will support the Copenhagen Accord, a non-binding framework set last month, only nine have stepped up, including Australia, France, Canada, Turkey, Singapore, Papua New Guinea, Serbia, Ghana and the Maldives. The U.S. and China are conspicuously absent from committals at this point.

Oil hit a 30-day low on Friday, closing at $74.54.

Then, on Thursday, the UN said it is making the January 31 deadline for commitments a 'soft' one, meaning that if they held to a hard deadline, the exercise would only yield a handful of participants and likely wouldn't include the countries which would yield the greatest influence and impact.

Gallop Polls this week **announced some interesting results from a survey** on various countries' awareness of climate change altogether:

- 32% of Indians say they know at least something about climate change, similar to awareness in previous years.
- After India, South Africans are the least likely to say they know something or a great deal about climate change.

In the U.S. the issue is far less about awareness than accountability, which seems to be perpetually underpinned by convenience (Aspire's take, not necessarily Gallops'). Some other interesting polls: **Developed and Emerging Nations Should Cut Emissions**; and **Americans Favor U.S. Signature on Copenhagen Treaty**.

The Aspire Week in Review is brought to you by:

SMALLCAPPULSE

We recently spoke with Energy Efficiency Systems' Chief Technology Engineer, Rob Winn:

Aspire: There are so many different EE applications coming to market, companies are going to the market in different ways, what makes EESG different? What makes it better?

Winn: *The breadth of the track record in having been in this for 20 years and coming at market with aspect of having been an integrator in the past, doing measurement and verification on behalf of the Navy, Southern California Edison, Detroit Edison, to put in measurement and verification technologies (hardware, software) to confirm individual energy conservation measure retrofits and their effectiveness.*

So being privy to, and collecting the data on a variety of technologies, and privy to different contractual obligations, it is extremely beneficial having the track record to see how these technologies perform. If they are performance based, financed, then the structure of what the shared savings is between the developer and the end customer - how those ultimately get measured and verified.

A lot of that has been done by the developer themselves and ultimately ends up irreconcilable to the actual consumption - for whatever the reason.

I think the differentiation is being able to tie those together from the beginning of the onset of a project. If you are going to go in and put in a building automation energy management and verification system, and all of that is one project. The measurement and verification is a byproduct of the building automation, supplier list system.

The end customer has the raw data set and the trend analysis from day 1. How is it consuming energy, and what assets are being utilized to consume that energy? Then from that baseline the engineering of the cost benefic analysis of the individual energy conservation measures can thus be more accurately calculated because you have actual data to work with as opposed to making certain assumptions. That becomes very beneficial. You ultimately right-size the retrofit because you know what the energy demands of the building or the facility is relative to the theoretical projections from the original engineering analysis is.

And generally the engineering is sized where it is oversized so that it may not run efficiently, even brand new, because it is not operating at its peak efficiency region of the individual piece of equipment. Said in layman's terms, if you bought a brand new pick up and you put a 600hp engine in it and you only need 50hp then your mileage is going to be deficient based on how often you may need that 600hp to pull the trailer or actually do the work. It becomes inefficient even though the individual piece of equipment may be efficient.

Aspire: When you are characterizing the uniqueness and customization whereby EESG tunes in an treats particular facilities relative to actual loads, are there any other alternatives in the market, that you are contrasting this against (Honeywell, Siemens, Johnson Controls, etc.), which come at you with a 'goliath' sort of treatment?

Winn: *In the case of the large energy conservation ESCO companies (Johnson, Honeywell), they typically come through and say we need to retrofit all of the building automation to a Honeywell brand controller as opposed to what we can do is pick up and use existing controls in the building, whether they are Honeywell, Johnson or brand "x" and make those intelligent.*

Generally speaking the Honeywell, Siemens, and Johnson Controls, a lot of the buildings we have been in to, put in a building automation system that has zero trend analysis.

They are not collecting any of the data into a database to store and go back and do engineering analysis of that data. It is a glorified time clock. Often times there is overhead cost, or dictatorial method, that once embedded into a client and then becomes 'well, we are not going to warranty, or guarantee, or perform unless you do A, B, and C and unless it is the equipment by choice that we have which is a Siemens chiller or boiler, or something of that nature.

I think it is much like a lot of the recurring sales models. Once you become a customer, there are annual software fees that have to be paid, and maintenance fees - if you don't elect to do that you will have a problem. To elect to fix the problem would effectively be more expensive than if you had stuck with the maintenance fee.

Most of these are hundreds of thousands of dollars for a complex. A hospital, a military base, a Class A building can be $20 to $50 thousand a year just in service and maintenance fees of the software.

So having it be proprietary it becomes onerous to come in and replace it if it is a Siemens or Honeywell system. Then someone can't 'talk' to the system with the new brand x system without replacing a lot of it because of the proprietary communication. Which is indicative of these open protocols, newer solutions which have some nuances…In those, for example, a Honeywell or LonWorks controller will not communicate all of its data if it is not a Honeywell software package. Some of the open protocol is still proprietary.

Aspire: If you were going to speak to the technology side of it and the proprietary nature of what EESG is doing specifically, where would you characterize its strengths, and where, from a technology roadmap the company should continue to follow?

Winn: *I think the one strength is that we will do the smaller buildings where most of the others won't because they don't have a cost effective product. Let's take the example of a bank opportunity where they have a Class A high-rise building where it would be beneficial to put a true, full building automation system, but the 50 branch banks that are 5,000 to 10,000 square feet may have 5,6 or 8 rooftop package units, lighting controls, access control, etc.*

In the case of the banks we have done in the past, what is important to them is the ATMs and being able to confirm from a liability perspective that the outdoor lighting in their ATMs is adequate, so that if vandalism, or the lighting shot out, and they have a burglar alarm, or one of their patrons has been attacked at an ATM that there were no lights under which becomes a legal liability.

It is things of that nature that when you ultimately tie that project together – a single common web portal to go look at individual banks or their Class A building on a common platform. So, it is not that 'we are going to cherry pick, as a larger ESCO where we are only going to do the 50,000 sq. ft. and up buildings because we can't afford to put a traditional Honeywell or Johnson Controls building automation in a 5,000 sq. ft. building because the capital cost just won't allow an adequate payback.'

It is tying it all together so that it doesn't matter if it is large or small they still have a common, ubiquitous interface so that they are used to being able to go to the same web pages and look at the data in the same format, as opposed to a building over here that is a Honeywell and its screens and navigation is completely different to a Siemens, to one that has nothing and relies upon manual data sets and utility bills to make some determinations.

At the end of the day what we have in the automated measurement and verification to create an energy usage index…It is data sets that have been downloaded and created, and when you have that data and when you can automate that you have a good trend and track record – let's use the bank building – if I have 40 of them out there I can see on a watts per square foot basis which ones are more energy intensive and which are less energy intensive and perform an comparative analysis.

The top ten more efficient units, 'what are we doing right there?' and the bottom ten, 'where can we make improvements?' so that we effectively get to a peak efficiency and be able to maintain that on a sustainable basis. A lot of this stuff is postage stamp, swapping out and making things right and then the ESCO leaves the contract behind and the maintenance people start bypassing the measures, taking things offline because they don't know how it works.

For instance a variable frequency drive – it goes in, gets programmed and goes into an alarm condition. No one knows how to reprogram it. No one knows how to utilize it so they put it in bypass. There is no intelligence back to the building owners. They think this variable frequency drive has gone in and is working, but it has been bypassed.

Now suddenly it is bypassed and nobody knows. A lot of that happens, and the challenge that large companies have is the systems they have are very complex, they get engineered from a central location, installed by local electricians (third party to them), and at the end of the day the plant operators are instructed on how to utilize the system but not how to maintain it and support it.

The challenge is that the lack of capabilities from a Johnson or Honeywell field office and actually supporting their own equipment yields bypasses, overrides and incorrect calibrations from the field people because they just don't know how to do it.

Market Overview

The alt energy and clean tech groups generally underperformed the broader markets this week, and are trailing year-to-date as well:

- **Biofuels Group** – down 7% on the week, and down 7% YTD;
- **Clean Tech/Pollution Controls Group** – down 5% on the week, and down 2% YTD;
- **Energy Management Group** – down 8% on the week, and down 2% YTD;
- **Energy (Waste Heat) Recovery Group** – down 8% on the week, and down 8% YTD;
- **Energy Storage Group** - down 10% on the week, and down 5% YTD;
- **Geothermal Group** – down 5% on the week, and down 7% YTD;
- **Rare Earth Minerals Group** – down 5% on the week, and up 14% YTD (buoyed by American Lithium, which is up 103% YTD);
- **Upstream Solar Group** – down 6% on the week, and down 9% YTD;
- **Midstream Solar Group** - down 11% on the week, and down 11% YTD;
- **Downstream Solar & Developers Group** - down 4% on the week, and down 5% YTD;
- **Solar Equipment & Systems Group**- down 5% on the week, and down 6% YTD;
- **Water Treatment & Infrastructure Group** – down 5% on the week, and down 7% YTD; and
- **Wind Energy Group** – down 10% on the week, and down 12% YTD.

Key Indices	1/22/2010	1/18/2020	Change	%	Change YTD	%	1/4/2010
DJIA	10,172.98	10,608.37	-435.39	-4.10%	-257.71	-2%	10,430.69
Nasdaq	2,205.29	2,291.02	-85.73	-3.74%	-89.12	-4%	2,294.41
S&P 500	1,091.76	1,136.03	-44.27	-3.90%	-24.80	-2%	1,116.56

Biomass and Biofuels

In Columbia, the Sugarcane Producer's Association said that 296.02 million liters of ethanol were produced from January to November of 2009, compared with 234.2 million liters for the same period of 2008. 29.21 million liters were produced in November of 2009 alone, up 77.7% over the November of 2008.

The United States Department of Agriculture and the Department of the Navy announced the two departments have signed a Memorandum of Understanding to encourage the development of advanced biofuels and other renewable energy systems. Amongst the objectives:

- When awarding contracts, appropriately consider energy efficiency and the energy footprint as additional factors in acquisition decisions.
- By 2012, demonstrate a Green Strike Group composed of nuclear vessels and ships powered by biofuel. By 2016 sail the Strike Group as a Great Green Fleet composed of nuclear ships, surface combatants equipped with hybrid electric alternative power systems running on biofuel, and aircraft running on biofuel.
- By 2015 cut petroleum use in its 50,000 non-tactical commercial fleet in half, by phasing in hybrid, flex fuel and electric vehicles.
- By 2020 produce at least half of shore based installations' energy requirements from alternative sources. Also 50 percent of all shore installations will be net zero energy consumers.
- By 2020 half of DoN's total energy consumption for ships, aircraft, tanks, vehicles and shore installations will come from alternative sources.

> Tactically, on the battlefield, the costs of transporting fuel is exponentially increased; in extreme cases a gallon of gasoline could cost up to $400.

The University of Virginia Department of Civil and Environmental Engineering **issued a report this week** citing environmental issues to algae production, saying it:

- Consumes more energy
- Has higher GHGs, and
- Uses more water than other biofuel sources.

Abengoa SA and Mid-Kansas Electric Company have agreed to build an ethanol and power plant in Kansas for $550 million.

Boeing, the Masdar Institute of Science and Technology, Etihad Airways and Honeywell's UOP are setting up a sustainable energy research forum in Abu Dhabi to conduct an aviation biofuel project.
Flambeau River Biofuels said this week it intends to build a $250 million biofuel facility in Northern Wisconsin which will be operational by 2013.

Kinder Morgan announced a $195 million acquisition of three unit train ethanol handling terminals in New Jersey, Maryland and Texas, from US Development Group. It is forming a JV with USDG to coordinate access to terminals with the objective of creating a nationwide distribution network of ethanol handling facilities connected by rail, marine, truck and pipeline. It has invested about $500 million into the renewable fuels handling business.

POET said it has cut its water use by 13% as a consequence of a recently installed water recovery system that allows the plant to recycle an additional 19 million gallons of waste water per year from the filtering system at the plant, bringing its total water use per gallon of ethanol down to 2.6 gallons. POET said its plants on average use about 3 gallons of water for each gallon of ethanol.

SunOpta BioProcess (Nasdaq:STKL) announced a supply contract with a "major ethanol producer" in China for its fiber and pretreatment equipment for use in the production in cellulosic ethanol. The equipment will be installed in a planned cellulosic ethanol demo plant in late 2010.

Biomass

The G+R Technology Group **announced its "Green Coal" (Gco©) technology**, which it refers to as "magic coal from the steam cooker, and plans to build the first industrial production plant for biocoal. It describes the production process – the so-called Hydrothermal Carbonisation (HTC) in technical terms – noting that it "is simple in principle and reminds you of cooking: all kinds of organic biomass are put into a kind of steam cooker, water is added as kind of converter and finally the mixture is heated. After a couple of hours the Green Coal (Gco©) emerges" and that "a further advantage of this method compared to other synthetic coal production processes : all organic residues and biowastes might be processed, even animal wastes and sewage sludges. Furthermore, the production process is a comparatively low-energy one and, what is even more important: compared to other production processes such as the one for biogas, the polluting greenhouse gas carbon dioxide is secondary when it comes to the extraction of the reaction product Green Coal (Gco©) by means of a "boiling process"."

Brazil

Brazil opened the world's first ethanol-fueled power plant (87MW), designed by Petrobras and General Electric, this week.

Fenabrave reported that the number of flex fuel vehicles licensed in the first half of January fell by 14.3% compared with the first half of December. However, sales of flex fuel vehicles still represented 83.8% of all autos and light trucks licensed.

Datagro reported that prices of ethanol at the consumer level averaged R$ 1.905 a liter for the period of January 10 through January 16, while gasoline was sold at an average of R$ 2.574 a liter.

Ethanol exports from Brazil in December 2009 were 124.4 million liters, compared to 194.4 million shipped in November 2009.

Accumulated in 2009, Brazilian exports of ethanol totaled 3.31 billion liters, 35.4% less than 2008.

Source: Datagro.com

Carbon, Clean Tech and Climate Change

In Taiwan, EPA Deputy Minister Chiu Wen-yen said the EPA is working on a system to label the carbon footprints of consumption products as part of efforts to reduce greenhouse gas emissions. The planned labeling system will be first applied to products such as PET-bottled beverages, cookies, candies and CDs, on a trial basis.

In Xiamen, the government is introducing a system designed to ban high-emission vehicles from its roads, which will be introduced in Q110. An environmental protection sign, which certifies that exhaust emission of a vehicle has met the national emission standards, will be affixed to all the in-use vehicles in Xiamen. A green sign on the vehicle indicates that it has met the National Emission Standard II, and a yellow sign on the vehicle means it has met the National Emission Standard I. Vehicles which get the yellow signs will be banned from the busy roads of Xiamen and vehicles that fail to meet exhaust emissions standards will be banned from entering the city.

Energy Management

The University of Delaware **[announced the first license for its vehicle-to-grid (V2G) technology]** with AutoPort, Inc., a major vehicle processing and modification facility in New Castle, Delaware. Under the terms of the licensing agreement, AutoPort has been granted non-exclusive rights in the area of commercial fleet vehicles.V2G technology, enables electric car owners to plug in their vehicles and send electricity back to electrical utilities.

Comverge (Nasdaq:COMV) announced a 10-year agreement to provide demand response services to the University of Maryland's campus facility and other state agencies. This is an expansion of a previous agreement with the UMD.

EnerNOC (Nasdaq:ENOC) said Boston's Seaport Hotel and Seaport World Trade Center has selected its CarbonTrak™ application to better measure its GHG footprint.

Earnings

Johnson Controls (NYSE:JCI) reported a 15% Y/Y increase in Q1 sales to $8.4 billion, and earnings of $366 million, or $0.52 per share, vs. a loss of $608 million last year. Building Efficiency sales were $3.0 billion, down 2% from $3.1 billion last year. The company said the lower sales reflect the late-cycle attributes of the building markets. It reported that its backlog of uncompleted contracts in the first quarter was $4.3 billion, down 8% versus the previous year. The company said its pipeline of potential new business improved in the quarter. The Building Efficiency segment reported segment income of $104 million, down 21% compared to $131 million in 2009.

Energy Storage

Ballard Power Systems (NASDAQ: BLDP) was awarded up to $4.8 million by Sustainable Development Technology Canada for a project to further develop fuel cell power module technology for the transit bus market. Design improvements will be implemented on test buses to be operated in Metro Vancouver, beginning in the fourth quarter of 2010. And it also announced that it has acquired a controlling interest in Dantherm Power with the aim of partnering to accelerate deployment of fuel cell backup power applications throughout Europe.

> Pike Research reported this week that it expects the portable fuel cell market, after a series of "false starts", to reach $2.3 billion by 2016, up from $185 million in 2009.

EnerDel (Nasdaq:HEV) said it is partnering with ITOCHU to develop and produce advanced battery systems for a residential smart grid energy storage project in Tokyo, where the 'secondary use' of a typical EV battery that has significant storage remaining, will be to sell it as residential grid storage. ITOCHU Property Development will begin selling the solution in an apartment building complex this month.

EnerDel also said it is investing $237 million in a new manufacturing plant for its lithium-ion battery systems which will more than double its U.S. production capacity.

Polypore's (NYSE:PPO) wholly-owned subsidiary, Celgard, LLC, announced plans to expand capacity at its existing Charlotte, North Carolina facility and build a new manufacturing site in Concord, North Carolina

EVs, Hybrids and PHEVs

The American Council for an Energy-Efficient Economy released **[environmental ratings for model year 2010 vehicles]**. The "greenest vehicle" title went again to Honda's natural gas-powered Civic GX, while the Toyota Prius and the Honda Civic Hybrid claim spots two and three.

> IHS Global Insight reported this week that it expects EVs and PHEVs to make up almost 20% of the global market for light vehicles by 2030.

The Department of Energy closed its $465 million loan with Tesla Motors, Inc. for construction of a manufacturing facility in southern California on the Model S electric sedan and a power-train manufacturing facility in Palo Alto, California. The Palo Alto facility will assemble electric vehicle battery packs, electric motors, and related electric vehicle control equipment, both for Tesla's own electric vehicle Volume production of the Model S is planned to begin in 2012 with a target production capacity of 20,000 vehicles per year by the end of 2013.

Piaggio & C. SpA and Enel SpA signed an agreement to develop the market for electric and hybrid vehicles.

Quantum Fuel Systems (Nasdaq: QTWW), said Fisker Automotive has secured access to an additional $115.3 million in private equity funding to develop plug-in hybrid car, which is necessary for Fisker to access a $528.7 million U.S. Department of Energy conditional loan. It has also entered into a letter of intent with Fisker Automotive that outlines the terms of a production and licensing agreement for the Fisker Karma Program. Under the supply arrangement, Quantum will be the exclusive supplier of the Q-Drive hybrid control systems including the hybrid controller and Quantum's proprietary hybrid control software, the inverters and Quantum's proprietary motor control software, on-board charger and control systems, the DC-DC converter and the solar roof module, subject to Quantum meeting the required price, performance, quality and delivery specifications. Quantum would also receive a royalty payment on each Karma sold that incorporates Quantum's Q-Drive. The definitive supply agreement, once finalized, is subject to approval by the Department of Energy.

ZAP (ZAAP.OB) and Zhejiang Jonway Automobile Co. Ltd. announced a commercial agreement to produce electric sport utility vehicles, cars and other electric vehicles in China for domestic and global distribution. ZAP said the agreement with Jonway is part of a multi-phase business plan it is implementing to target the China electric vehicle market.

Geothermal

Magma Energy Corp. (MXY.TO) said it was awarded the 100,000 hectare Pellado property by the Chilean government, noting that its consultant, Sinclair Knight Mertz, estimates that a large heat anomaly straddling the Pellado property contains an Inferred Resource of 320MW of capacity. Pellado adjoins another property (Maule) which it has submitted a development plan for a 50MW project. The company added that it is completinga13km access road which will enable drilling to commence in February 2010.

Nevada Geothermal (NGLPF.OB) said its Faulkner 1 geothermal plant "automatically shut down" on January 17 due to a "ground fault" problem in the electrical control system. It said the plant will remain off-line through inspection of the electrical system and underground cables. According to the company, the power plant, including electrical controls, is covered by the warranty provided under the EPC contract.

Research Capital's Matthew Gowing issued a note, stating he spoke with management and "feels more comfortable that this is a very minor operational negative and any share price weakness should be used as a buying opportunity." The stock opened at $0.92 and closed at $0.88, hitting an intraday low of $0.85. Importantly, Gowing emphasized that "all lost revenue and increased expenses relating to the shut-down are covered b Ormat under the EPC warranty." Ormat (NYSE:ORA) traded down $0.88, or $2.42 for the session.

Hydropower and Ocean Energy

Pike Research said this week that if ocean energy trials are successful in the next few years, the market could reach up to 200GW of installed electrical generation capacity by 2025. On the other hand, if early projects have limited success, are too costly, or don't get political support, the sector may be relegated to niche status, reaching only about 25GW by 2025.

Rare Earth Minerals

Researchers at the East China University of Science and Technology, Shanghai, found that doping a catalyst with a rare earth element—europium—enhances hydrogen production in the process of partial oxidation of methane to produce syngas (CO and H_2).

Canada Lithium Corp. (TSXV: CLQ) said it intersected higher-grade lithium mineralization including 3.08% Li2O over 8.8 meters and 1.33% Li2O over 19 meters at its Quebec Lithium Project. The higher grade intercepts were from the initial holes of a 28-hole, 7,500-metre drill program undertaken to confirm, and potentially expand, the deposit's historical but non-NI 43-101 compliant resource of 15 million tons grading 1.14% Li2O.

Orocobre Ltd. is establishing a joint venture with Toyota Tsusho Corp. to develop its Salar de Olaroz lithium potash project in Argentina. Toyota Tsusho will take a 25% stake in the project and will provide $4.5 million for a feasibility study, as well as a low-cost Japanese government loan to fund at least 60 percent of the project’s development.

Solar

Germany's environment minister, Norbert Roettgen, proposed on Wednesday a 15% reduction in feed-in tariffs for solar power that will go into effect in April for roof installations and in July for open-field sites. Cowen’s Rob Stone said he thinks solar stocks are oversold in reaction to the proposed cuts, emphasizing the positives:

- German policy now targets a significantly larger PV market. The Environment Minister is targeting a 5% share of German power consumption for PV by 2020, and the threshold levels that would trigger additional FIT reductions are increased to 3.5GW and 4.5GW;
- Module price adjustments to accommodate German market conditions will drive more attractive IRRs. Stone sees mid-high single digits for Germany;
- Expect share gains by lower-cost, higher performance players to accelerate, benefitting Asian direct brands and private label production – bad for higher-cost European capacity. Expects ground market to shift back to First Solar (Nasdaq:FSLR).

PVTech.org reported that iSuppli Corps Senior Director and Principal Solar analyst, Dr. Henning Wicht expects a significant rush to install PV systems before FiT changes cause a dramatic fall in demand:

- projecting installations to reach approximately 1GW in the first quarter,
- then will plummet to only 50MW in April
- and remain at the 100MW level in May and June
- a recovery in demand is expected with a forecast of 2.7GW of total installations in 2010.

Samsung said this week that it will establish and operate a series of wind and solar power “clusters” over the next 20 years, investing $6.67 billion and creating more than 16,000 jobs in Ontario, Canada. The Ontario operations will include wind turbines that will generate as much as 2,000 megawatts of power, as well as solar power facilities that will generate up to 500 megawatts. The first stage will be built by the first quarter of 2013.

Upstream

Confluence Solar said it is building a silicon ingot plant on a 25 acre site in Clinton, Tennessee for about $200 million. The company claims that its ‘HiCz’ single crystal ingot growing technology offers 15% better cell conversion efficiencies but at a cost comparable or better than using multi-crystal silicon ingots.

Midstream

Quantum Fuel Systems (Nasdaq:QTWW) announced it has been selected as one of twelve "qualified suppliers" for solar materials and services to the City of Los Angeles Water and Power (LADWP) which has a goal of installing 200MW of solar capacity by 2012.

Trina Solar (NYSE:TSL) said it has made initial shipments to RF Industries Pty Ltd. which is part of its agreement to supply up to 10MW of PV modules this year.

Energy Conversion Devices (Nasdaq:ENER) reported that United Solar Ovonic has received a $13.275 million credit from the Department of Energy which will support plans to invest $42 million into its Auburn Hills 1 facility upgrades.

Utility Scale

Masdar and Sener JV, Torresol Energy announced having secured US$760 million in project finance loans for the construction of its twin CSP plants, Valle 1 and Valle 2, in Andalucía, Spain. The total investment value for the two plants is US$1bn.

Solar Equipment

GT Solar International, Inc. (NASDAQ: SOLR) announced contracts in excess of $40 million with two wholly owned subsidiaries of China-based GCL-Poly Energy Holdings Limited. The first agreement, with Jiangsu Zhongneng Polysilicon Technology Development Co., Ltd., is for GT Solar's best-in-class Trichlorosilane (TCS) Production Technology Solution. The second, with Jiangsu GCL Silicon Material Technology Development Co. Ltd., is for GT Solar's market-leading Directional Solidification System (DSS) furnaces and ancillary equipment.

Jiangsu GCL Silicon Material Technology Development Co., a wholly-owned subsidiary of GCL-Poly Energy placed an order with Meyer Burger for wafer slicing equipment worth CHF35 million. Wafer inspection systems from Hennecke Systems, a subsidiary of Meyer Berger, have also been purchased. Delivery is scheduled for completion in the third quarter of 2010.

Sustainable Energy Technologies signed a supply deal for up to 10MW of Sunergy inverters to Spanish Tejados Industriales de Fotovoltaica.

Wind Energy

The EWEA **reported this week** that "In 2009, a total of eight new wind farms consisting of 199 offshore wind turbines, with a combined power generating capacity of 577 MW, were connected to the grid in Europe. This represents a growth rate of 54% compared to the 373 MW installed during 2008. For 2010, the European Wind Energy Association (EWEA) expects the completion of 10 additional European offshore wind farms, adding 1,000 MW and equivalent to market growth of 75% compared to 2009."

DOE Watch

The DOE **announced the selection of five projects** to receive more than $20.5 million from the American Recovery and Reinvestment Act to support deployment of community-based renewable energy projects, such as biomass, wind and solar installations.

State and Federal Driven News

In the Senate

Feeling her oats on the heels of a key election win for her party this week in Massachusetts, **[Lisa Murkowski (R-AK)]** filed an amendment aimed at preventing the EPA from regulating carbon emissions. Probably the most frustrating statement, though, came from Senator Reid (D-NV) who said, "If this senator (Murkowski) succeeds, it could keep Congress from working constructively in a bipartisan manner to pass clean energy legislation this year." The fact that Reid thinks there is anything bipartisan going on in Washington is a joke. Murkowski was joined by 35 Republicans and 3 Democrats including:

Senators Murkowski, Lincoln (D-AR), Barrasso (R-WY), Nelson (D-NE), Chambliss (R-GA), Landrieu (D-LA), Thune (R-SD), Hutchinson (R-TX), Graham (R-SC), Coburn (R-OK), Isakson (R-GA), Grassley (R-IA), Alexander (R-TN), Bond (R-MO), Inhofe (R-OK), Bunning (R-KY), Crapo (R-ID), Brownback (R-KS), Roberts (R-KS), McConnell (R-KY), Enzi (R-WY), McCain (R-AZ), Wicker (R-MS), Lugar (R-IN), Corker (R-TN), Cochran (R-MS), Kyl (R-AZ), Bennett (R-UT), Risch (R-ID), Johanns (R-NE), Sessions (R-AL), Voinovich (R-OH), Burr (R-NC), Shelby (R-AL), Gregg (R-NH), Hatch (R-UT), Lemieux (R-FL) and DeMint (R-SC).

Finance and M&A

A-Power Energy (Nasdaq: APWR) closed a private placement for $83 million in cash where net proceeds from the placement will be used to fund a portion of the purchase price of the its EVATECH acquisition and the remainder of the net proceeds have been designated for investment in additional components for the manufacturing of turbines, funding of existing projects and additional working capital. A-Power issued investors in the placement 5,777,932 common shares ("Shares") at $14.37 per share. In addition, the Company issued warrants to purchase an aggregate of 2,888,966 Shares, 2,099,822 of the warrants are exercisable at $16.90 per share and the remainder is exercisable at $16.91 per share. The warrants will be initially exercisable six months after January 21, 2010 and will remain exercisable for a five-year period thereafter.

Broadwind Energy (Nasdaq:BWEN) completed its offering of common stock at $5.75 per share, selling10,000,000 newly issued shares. Tontine Capital Partners, L.P., and certain of its affiliated funds, sold a combined total of 6,125,000 shares and Broadwind's CEO, J. Cameron Drecoll, sold 1,125,000 shares. The sales included all shares subject to the underwriters' over-allotment option.The net proceeds to Broadwind were approximately $53.9 million. Macquarie Capital (USA) Inc. and J.P. Morgan Securities Inc. acted as joint book-running managers of the offering. Raymond James & Associates, Inc. and Lazard Capital Markets LLC acted as co-managers.

Solar City announced a $60 million tax equity financing from Pacific Venture Capital, LLC, a subsidiary of PG&E Corporation (NYSE: PCG), for solar installations for U.S. homes and businesses. The investment—funded by PG&E Corporation shareholders—is expected to allow SolarCity to install more than 1,000 solar systems for U.S. homeowners and businesses via the company's SolarLease® and Power Purchase Agreement financing options. Under the agreement, in return for providing the upfront investment needed for the new systems, Pacific Venture Capital will receive lease revenues from SolarCity customers, along with the benefits of federal investment tax credits and local rebates for the solar energy projects.

JinkoSolar Holding Co Ltd **[filed for an initial public offering]** of up to $100 million.

Ecobee raised $6.73M in venture capital financing from Ontario Emerging Technologies Fund (OETF), JLA Ventures and Tech Capital Partners.

FloDesign Wind Turbine raised $34.5 million in Series B funding from Kleiner, Perkins, Caufield and Byers was joined by new investors Goldman Sachs, Technology Partners and VantagePoint Venture Partners.

Ember Corp. raised $5 million in venture debt funding from Wellington Financial.

Hydrogenics (Nasdaq:HYGS) said it closed the previously announced registered direct offering of common shares and warrants with two institutional investors, resulting in gross proceeds of US$5,000,000.Under the terms of the transaction, Hydrogenics sold 12,500,000 common shares at US$0.40 per share. Investors received warrants for the purchase of one common share for each common share purchased; 5,983,886 of these warrants are exercisable at any time on or after the date of issuance until January 14, 2015 at an exercise price of US$0.52 per common share. The remaining 6,516,114 warrants are exercisable for a period of five years beginning six months and one day after issuance, at an exercise price of US$0.52 per common share. Chardan Capital Markets, LLC acted as the sole placement agent for this transaction. The stock closed at $0.36 on Friday.

Siemens AG (NYSE:SI) is investing $50 million in the DB Masdar Clean Tech Fund to boost “green innovations” in Abu Dhabi

Ultralife Corporation (NASDAQ: ULBI) has secured a commitment from RBS Business Capital, a division of Citizens Financial Group, for a $35 million senior secured asset-based revolving credit facility that will replace the its $35 million senior secured revolving credit facility with its current lenders, JPMorgan Chase Bank, N.A. and Manufacturers and Traders Trust Company.

American Lithium Minerals (AMLM.OB) is acquiring both the North Borate Hills and South Borate Hills Lithium Projects in Nevada covering 3,400 acres located 20 miles west of Chemetall Foote's Lithium Brine Operation at Clayton Valley.

Rodinia Minerals (TSXV.RM) entered into an agreement with Borax Argentina SA, a subsidiary of Rio Tinto Minerals, to acquire three separate lithium-brine projects in Salta, Argentina: the Salar de Diablillos; the Salar de Centenario ("Centenario"); and the Salar de Ratones. **Click here** for more information and terms.

The National Renewable Energy Laboratory (NREL) is investing up to US$12 million in total funding in four companies to support the development of early stage solar energy technologies and help them advance to full commercial scale:

- **Alta Devices, Inc. (Santa Clara, CA) up to $3 million**
- **Solar Junction (San Jose, CA) up to $3 million**
- **Tetra Sun (Saratoga, CA) up to $3 million**
- **Semprius (Durham, NC) up to $3 million**

Upgrades & Downgrades

January 19 – AeroVironment (Nasdaq:AVAV) price target raised at Broadpoint AmTech to $41 from $37, citing potential for charger unit sales.

January 19 – JA Solar (Nasdaq:JASO) cut from BUY to NEUTRAL at Broadpoint AmTech.

January 20 – Archer Daniels Midland (NYSE:ADM) raised to BUY from HOLD at Citigroup with the price target raised to$37 from $33, citing strength in the oilseed processing market and a positive inflection in ethanol profitability – “top pick in our coverage universe” – according to David Driscoll.

January 21 – Echelon (Nasdaq:ELON) initiated at HOLD at Roth Capital with a price target of $11.

January 21 – Polypore (NYSE:PPO) upgraded to OUTPERFORM at William Blair.

January 22 – Q-Cells (QCE.DE) cut to SELL at UniCredit noting increased risk to financial performance from proposed cuts in the German FiT.

January 22 – Renewable Energy Corporation (REC.OL) cut to SELL at UniCredit noting increased risk to financial performance due to proposed cuts in the German FiT.

January 22 – SolarWorld cut to SELL at UniCredit noting increased risk to performance due to proposed cuts in the German FiT.

January 22 – Phoenix Solar AG (PS4G.DE) reiterated at BUY at UniCredit citing better competitive positioning to deal with pricing pressure and diversifying global installation growth.

January 22 – SMA Solar Technology (OLQ7.L) reiterated at BUY at UniCredit citing better competitive positioning to deal with pricing pressure and diversifying global installation growth.

January 22, 2010 – Analyst Comments – Research Capital's Matt Gowing lined out his top picks for 2010:

- **Top Alternative Energy Small Cap Pick: Nevada Geothermal (NGPLF.OB),** at a BUY with a $1.50 price target. Gowing said NGP will report its first revenue in its Q2/10 financial statements. He expects the $95 million John Hancock debt re-financing to strengthen the balance sheet, and thinks NGP is a "prime take-out candidate in the geothermal sector because of its high-quality assets." Gowing said at 49.5MW of gross geothermal capacity the stock is trading at a deep discount to its peers, and estimates its NAV to be about $1.30/share, not incorporating in the investment tax credits from the US government which he thinks are worth an additional $0.66 per share.

- **Top Alternative Energy Large Cap ("Defensive") Pick for 2010: Algonquin Power & Utilities Corp. (AQN.TO)**, at a BUY rating and $5.25 price target. Like Algonquin's diverse portfolio of renewable power generation and infrastructure assets, stable stream of cash flows, and thinks "repositioning to a growth company is still not reflected" in valuation. Base price target on 8.75x multiple to 2010 EBITDA estimates. Near-term catalysts include water rate increases, closing of Calpeco and Integrys Energy Services asset acquisitions.

- **Top Alternative Energy "Armageddon Stock" for 2010: Magma Energy Corp (MXY.TO)** at a BUY rating and $2.75 price target. Thinks deep valuation discount relative to peers is unwarranted, given expansive land portfolio, aggressive growth targets which should drive revenue and EBITDA growth, and seasoned management team. "Strong, cashed-up balance sheet is competitive advantage in "Armageddon" scenario." To arrive at $3/NAV, not including value of early stage projects which Gowing calculates at more than $5 per share.

- **Top Alternative Energy Stock to Avoid – For Now: Boralex Power Income Fund (BPT.un),** not rated. Challenged in obtaining reliable fuel supply from beleaguered forestry industry and payout ratio remains high. Higher interest rates could create additional pressure.

Research & Reports

Eastern Wind Integration and Transmission Study

DOE commissioned the Eastern Wind Integration and Transmission Study (EWITS) through its National Renewable Energy Laboratory (NREL). The investigation, which began in 2007, was the first of its kind in terms of scope, scale, and process. The study was designed to answer questions posed by a variety of stakeholders about a range of important and contemporary technical issues related to a 20% wind scenario for the large portion of the electric load (demand for energy) that resides in the Eastern Interconnection (Figure 1). The Eastern Interconnection is one of the three synchronous grids covering the lower 48 U.S. states. It extends roughly from the western borders of the Plains states through to the Atlantic coast, excluding most of the state of Texas.

The study shows the following:

- High penetrations of wind generation—20% to 30% of the electrical energy requirements of the Eastern Interconnection—are technically feasible with significant expansion of the transmission infrastructure.

- New transmission will be required for all the future wind scenarios in the Eastern Interconnection, including the Reference Case. Planning for this transmission, then, is imperative because it takes longer to build new transmission capacity than it does to build new wind plants.

- Without transmission enhancements, substantial curtailment (shutting down) of wind generation would be required for all the 20% scenarios.

- Interconnection-wide costs for integrating large amounts of wind generation are manageable with large regional operating pools and significant market, tariff, and operational changes.

- Transmission helps reduce the impacts of the variability of the wind, which reduces wind integration costs, increases reliability of the electrical grid, and helps make more efficient use of the available generation resources. Although costs for aggressive expansions of the existing grid are significant, they make up a relatively small portion of the total annualized costs in any of the scenarios studied.

- Carbon emission reductions in the three 20% wind scenarios do not vary by much, indicating that wind displaces coal in all scenarios and that coal generation is not significantly exported from the Midwest to the eastern United States; carbon emissions are reduced at an increased rate in the 30% wind scenario as more gas generation is used to accommodate wind variability. Wind generation displaces carbon-based fuels, directly reducing carbon dioxide (CO_2) emissions. Emissions continue to decline as more wind is added to the supply picture. Increasing the cost of carbon in the analysis results in higher total production costs.

Testing the Water Report: Smart Metering for Water Utilities

Smart grid" has received a lot of buzz in recent months – with electric utilities receiving most of the spotlight, launching initiatives that improve network reliability, enhance efficiency, and help drive more-informed consumption decisions. But, electric utilities aren't the only ones facing aging infrastructures, sustainability challenges, and customer demand for better service. Water utilities face these challenges too – and smart grid initiatives (with smart metering playing a key role) – can help address them. With growing pressure, water utilities will need a more intelligent approach to managing water consumption to meet environmental concerns.

Oracle surveyed more than 300 water utility managers and 1,200 water consumers in the United States and Canada to examine: Water utility managers' perception of, and future plans for, smart meter technology, including benefits and potential obstacles ; and Water consumers' perception of their water use, motivations for conservation, and what they feel they need from their water utilities moving forward.

EIA Energy Data

	Total (All Sectors)		
October	**2009**	**2008**	**% Change**
Net Generation (thousand MWh)			
Coal	141,551	153,143	-7.6%
Petroleum Liquids	1,855	1,856	-0.1%
Petroleum Coke	685	1,348	-49.2%
Natural Gas	71,837	72,767	-1.3%
Other Gases	947	777	21.9%
Nuclear	57,688	62,793	-8.1%
Hydroelectric	19,633	15,120	29.8%
Wood and Wood-Derived Fuels	11,519	10,104	14.0%
Other Biomass	1,370	1,332	2.9%
Geothermal	1,185	1,278	-7.3%
Solar Thermal and PV	59	58	1.7%
Wind	5,802	4,309	34.6%
Hydro Pumped Storage	(385)	(497)	-22.5%
Other	916	820	11.7%
All Energy Sources	306,245	318,232	-3.8%
Renewable Energy	39,568	32,201	22.9%
Renewable Energy (ex Hydro)	19,935	17,081	16.7%
RE as % of Total Energy	12.9%	10.1%	27.7%
RE (ex Hydro) as % of Total Energy	6.5%	5.4%	21.3%
Source: EIA/Electric Power Monthly January 2010			

- Wind generation increased 34.6% in October 2009 on a Y/Y basis, while renewable energy increased by 22.9% (16.7% ex hydro).

	Total (All Sectors)		
January Through October	**2009**	**2008**	**% Change**
Net Generation (thousand MWh)			
Coal	1,463,892	1,670,607	-12.4%
Petroleum Liquids	23,002	25,947	-11.4%
Petroleum Coke	11,243	11,975	-6.1%
Natural Gas	780,930	751,661	3.9%
Other Gases	8,619	10,144	-15.0%
Nuclear	667,241	669,842	-0.4%
Hydroelectric	225,781	212,039	6.5%
Wood and Wood-Derived Fuels	30,437	32,455	-6.2%
Other Biomass	13,998	14,266	-1.9%

Geothermal	12,026		12,384		-2.9%
Solar Thermal and PV	732		802		-8.7%
Wind	53,769		41,651		29.1%
Hydro Pumped Storage	(3,690)		(5,248)		-29.7%
Other	9,279		8,742		6.1%
All Energy Sources	3,297,257		3,457,268		-4.6%
Renewable Energy	336,743		313,597		7.4%
Renewable Energy (ex Hydro)	110,962		101,558		9.3%
RE as % of Total Energy		10.2%		9.1%	12.6%
RE (ex Hydro) as % of Total Energy		3.4%		2.9%	14.6%
Source: EIA/Electric Power Monthly January 2010					

Upcoming Events

Webinar: FIT for Life - The importance of feed-in tariffs in driving global PV demand
Tuesday, January 26

Webinar Agenda

Welcome and Opening Remarks (agenda, speaker introductions) - Dan Martin; (Moderator: Steven Buehler, SEMI)

- Introduction: Why FIT policies are important (what is a FIT, role in Germany, etc.) - Gerhard Stryi-Hipp, Fraunhofer, ISE
- The importance of establishing a stable investment climate for PV - Mark Fulton, Deutsche Bank
- Global FIT Update (Germany, Spain, Japan, US, and emerging markets) - Wilson Rickerson, Meister Consultants Group
- Best Practices in FIT Policy Design – Panel discussion
- Q&A

Greentech Media's Solar Summit: 2010

Leading solar companies, influential regulators and policymakers, forward-thinking utilities, and bullish investors will come together once again for two days in the desert to debate the future of the solar industry at Greentech Media's Annual Solar Industry Summit in Phoenix, AZ. On the agenda are panels, presentations and keynotes aimed at defining successful corporate strategies, highlighting new business opportunities and analyzing challenges the market is expected to face in the coming years.

The EDTA Conference & Annual Meeting

January 26 – 28, 2010
United States (Washington D.C.)

The EDTA Conference will feature a 3 day program, including two general plenary sessions, 12 breakout sessions covering all aspects of the electric drive industry, and pre-conference workshops.

[2010 Forum on Energy Efficiency in Agriculture](#)

February 7-9, 2010
United States (Madison, WI)

The ACEEE Ag Team has been busily working with the Steering Committee and the Dairy Business Innovation

[Wind Power Finance & Investment Summit](#)

February 10-12, 2010
United States (San Diego, CA)

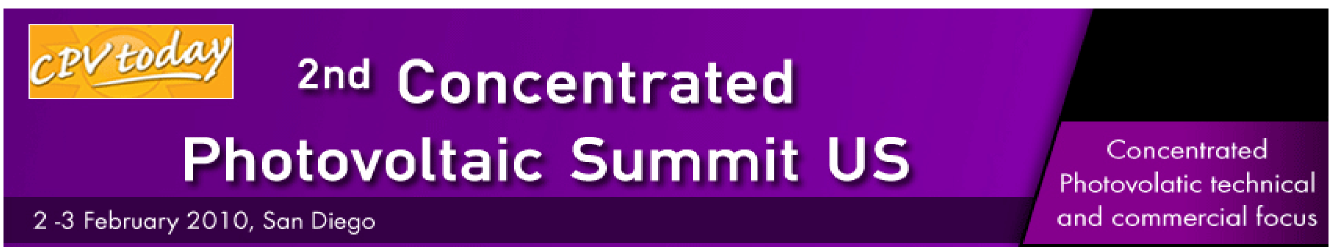
The annual Wind Power Finance & Investment Summit is an important gathering place for the wind industry's decision makers. Year after year, leading wind power project developers, capital providers, and other key players gather to network and discuss strategies for continuing wind's dynamic growth in installed capacity, deals, M&A, and financing.

[WINDPOWER 2010](#)

May 23-26, 2010
United States (Dallas, TX)

Attendance growth has also been an important trend seen at AWEA's other workshops and conferences which focus on specific facets of the industry. For more details, visit www.awea.org/events.

Center (DBIC) to put together an exciting program for this February's Ag Forum and the accompanying one-day event, the Profitability and Environmental Sustainability in the Dairy Industry Conference.



Power into Commercial CPV...Your Roadmap to Opportunities, Projects and Finance!

Drive down costs, drive up margins – A comprehensive evaluation of the whole CPV system; understand where and how to reduce your production costs and drive forward the most competitive, cost effective and COMMERCIAL product!

Finance your projects – Take an extensive look at public and private funding opportunities that are available to CPV companies and hear how you can stand out from the crowd to obtain finance that will lift your projects off the ground!

Global technological insight – Hear from leading CPV players from around the world and implement their innovative solutions from temperature control to 'efficiency versus concentration' that will guarantee your project's success

Insider knowledge from Utilities – How do utility companies approach CPV, and how do they plan to engage with you? Get unique insight into PPA´s and taking your system to the ultimate, utility-scale level!

Gear up to market – Find out how to achieve IEC and UL standards and realize automation so that you are ready to ramp up volume and enter the market with speed and ease. For more information, **click here**.

Other Upcoming Conferences

North America	Rest of World

North America

• April 12-13:
4th Annual Cap-and-Trade Forum
t. Andrew's Club and Conference Centre, Toronto, Canada
Contact: Dr. Victor Pogostin
Telephone: 416-777-2020
Fax: 416-777-1292
Email: vpogostin@alm.com
Website: http://www.insightinfo.com/capandtrade

• April 29-30:
ASA Committee on Energy Statistics
Washington, DC
Contact: Alethea Jennings
Phone: 202-586-5879
E-mail: Alethea.Jennings@eia.doe.gov

• April 29-30:
2nd Annual Saskatchewan Oil & Gas Forum
Regina Inn Hotel and Convention Centre, Regina, SK, Canada
Contact: Dr. Victor Pogostin
Telephone: 416-777-2020
Fax: 416-777-1292
Email: vpogostin@alm.com
Website: http://www.insightinfo.com/saskoilandgas

• May 3-6:
NHA Hydrogen Conference & Expo 2010
"Green Energy, Green Jobs, Green Planet"
Long Beach Convention Center, Long Beach, CA
Contact: Emily Kahn
Telephone: (202) 223-5547 ex. 304
E-mail: info@hydrogenassociation.org
Website: http://www.hydrogenconference.org

• May 24-25:
Eastern Coal Council
31st ANNUAL Conference & EXPO
Conference Center, Kingsport, TN
Contact: Marsha Presley or Barbara Altizer
Telephone: 276-964-6363 *or* 276-964-9088
Fax: 276-964-6342
E-mail: ecc@easterncoalcouncil.org
Website: www.easterncoalcouncil.org

• May 24-25:
Eastern Coal Council
31st ANNUAL Conference & EXPO

Rest of World

• April 5-8:
Smart Electricity World Asia 2010
Suntec City Convention Center, Singapore
Contact: Christine Foo
Telephone: +65 6322 2793
Email: christine.foo@terrapinn.com
Website: http://www.terrapinn.com/2010/smartasia/

• April 5-9:
Power & Electricity Asia 2010
Suntec Singapore
Contact: Chua Yee Ling
Telephone: +65 6322 2757
Email: yeeling.chua@terrapinn.com
Website: www.terrapinn.com/2010/asiapower

• April 13-16:
World CTL 2010 Conference
Great Wall Sheraton Hotel, Beijing, China
Contact: AFG (French Gas Association)
Telephone: +33 1 44 01 8713
Fax: +33 1 44 01 8792
Email: registration@world-ctl2010.com
Website: http://www.world-ctl2010.com/

• April 14-16:
6th International Congress and Exhibition on Energy Efficiency and Renewable
Energy Sources for South East Europe
Inter Expo Center, Sofia, Bulgaria
Contact: Via Expo
Telephone: +359 32 945459
Fax: +359 32 960011
Email: office@viaexpo.com
Website:
http://www.viaexpo.com/index.php?option=com_content&view=article&id=30&Itemid=40&lang=en

• April 18-21:
16th International Conference & Exhibition on Liquefied Natural Gas
Oran Convention and Exhibition Centre, Oran, Algeria
Contact: Glenyse Ford
Telephone: +61 3 9321 6759
Fax: +61 3 9321 6751
Email: gford@etf.com.au
Website:
http://www.viaexpo.com/index.php?option=com_content&vie

Conference Center, Kingsport, TN
Contact: Marsha Presley or Barbara Altizer
Telephone: 276-964-6363 *or* 276-964-9088
Fax: 276-964-6342
E-mail: ecc@easterncoalcouncil.org
Website: www.easterncoalcouncil.org

• June 7-8:
Deloitte Energy Conference
Washington, DC
Contact: Mandy Kaur
Phone: 703-251-3687
E-mail: mandykaur@deloitte.com
Website: www.deloitte.com/us/energy

• June 13-16:
District Energy/CHP 2010: 101st Annual Conference & Trade Show
Creating an Efficient Energy Future
Westin Indianapolis and Indiana Convention Center, Indianapolis, IN
Contact: IDEA
Telephone: 508-366-9339
Fax: 508-366-0019
Email: idea@districtenergy.org
Website: www.districtenergy.org

• July 23-25:
SolWest Renewable Energy Fair
John Day, OR
Contact: Jennifer Barker
Telephone: 541-575-3633
Email: info@solwest.org
Website: www.solwest.org

• September 15-17:
Electric Market Forecasting Conference
Skamania Lodge in Stevenson, WA
Contact: Stephanie Perry
Telephone: 208-255-3912
Fax: 208-263-4515
Email: stephanieperry@epis.com
Website: http://www.epis.com/Events/Default.htm

• September 27-29:
2010 IEEE Conference on Innovative Technologies for an Efficient and Reliable Electricity Supply
Waltham, Massachusetts
Contact: IEEE Boston Section
Telephone: 781-245-5405
Fax: 781-245-5406
E-mail: info@ieee-energy.org

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• April 22-23:
Mozambique Mining & Energy Conference (MMEC)
Joaquim Chissano Conference Centre, Maputo, Mozambique
Contact: Sergio Silva
Phone: 0044 207 700 5090
Email: Sergio@ametrade.org
Website: www.mozmec.com

• April 27-29:
Oil & Gas Outlook North Sea
The Royal Garden Hotel, London, UK
Contact: Paul Gilbertson
Phone: +44 (0)20 7092 1245
Email: paul.gilbertson@terrapinn.com
Website: www.terrapinn.com/2010/northsea

• May 5–6:
Biofuels International Expo & Conference 2010
Barcelo Hotel, Prague, Czech Republic
Contact: Candice Scorer
Telephone: + 44 20 86874160
Fax: + 44 20 86874130
E-mail: candice@horseshoemedia.com
Website: http://www.biofuelsinternationalexpo.com/

• May 6-7:
Ocean Energy
Brussels, Belgium
Contact: Ben Leighton
Telephone: +971 4 813 5210
E-mail: ben.leighton@greenpowerconferences.com
Website:
http://www.greenpowerconferences.com/general/event_listings.html

• May 10–12:
MINEPEC 2010, Niger Petroleum and Mining Conference & Exhibition
Palais des Congres, Niamey, Niger
Contact: AME Trade Ltd
Telephone: +44 207 700 4857 / +44 207 700 5090
Fax: +44 207 681 3120
E-mail: dancoberman@ametrade.org
Website: www.ametrade.org

• May 17-19:
4th Annual Global Refining Summit 2010
Beurs-WTC Congress Center, Rotterdam, Netherlands
Contact: Richard Jones
Telephone: +44 (0)207 202 7690

Website: http://www.ieee-energy.org/

E-mail: richard.jones@wtgevents.com
Website: www.refiningsummit.com

• June 3-5:
International Environmental Conference and Exhibition
Sofia, Bulgaria
Contact: Via Expo Ltd.
Telephone: +359 32/960012
Fax: +359 32/945459
E-mail: office@viaexpo.com
Website:
http://www.viaexpo.com/index.php?option=com_content&view=article&id=113&Itemid=138&lang=en

• June 7-8:
Renewable energy research conference – renewable energy beyond 2020
Trondheim, Norway
Contact: Christer Skotland
Telephone: +4773550376
Fax: +4773593580
E-mail: christer.heen.skotland@ntnu.no
Website: http://sffe.no/conference/

• June 22-23:
International Refining Conference
Sheraton Roma Hotel, Rome, Italy
Contact: Hadley McClellan
Phone: +1 713 520 4475
Fax: +1 713 520 4433
E-mail: Hadley.McClellan@GulfPub.com
Website: www.GulfPub.com/IRC

• September 29 - October 1:
3rd International Conference on Passive and Low Energy Cooling for the Built Environment (PALENC 2010)
Rhodes Island, Greece
Contact: Maria Liatsou
Telephone: +30 2109730697
Fax: +30 2109767208
E-mail: palenc2010@heliotopos.net
Website: http://palenc2010.conferences.gr

This Week's Performance of Aspire Clean Tech Groups

Biofuels	1/22/2010	1/18/2020	Change	%	Change YTD	%	1/4/2010
Andersons	27.50	26.47	1.03	4%	1.49	6%	26.01
Archer Daniels Midland	30.47	30.50	-0.03	0%	-1.01	-3%	31.48
Aventine Renewable Energy	0.27	0.28	-0.01	-4%	-0.09	-25%	0.36
BioFuel Energy	3.15	3.41	-0.26	-8%	0.48	18%	2.67
BlueFire Ethanol	0.62	0.85	-0.23	-27%	-0.38	-38%	1.00
China Integrated Energy	7.27	8.79	-1.52	-17%	0.16	2%	7.11
China Clean Energy	0.62	0.65	-0.03	-5%	0.12	24%	0.50
Cosan	8.27	9.09	-0.82	-9%	-0.53	-6%	8.80
GreenHunter Energy	1.31	1.43	-0.12	-8%	-0.03	-2%	1.34
Green Plains Renewable	12.81	15.12	-2.31	-15%	-2.28	-15%	15.09
Gushan	1.21	1.32	-0.11	-8%	-0.19	-14%	1.40
New Generation Biofuels	0.70	0.70	0	0%	-0.19	-21%	0.89
Pacific Ethanol	2.02	2.15	-0.13	-6%	1.31	185%	0.71
SunOpta	3.23	3.17	0.06	2%	-0.18	-5%	3.41
Verenium	4.80	5.16	-0.36	-7%	0.3	7%	4.50
Median				-7%		7%	

Clean Tech	1/22/2010	1/18/2020	Change	%	Change YTD	%	1/4/2010
Acorn Energy	5.63	6.00	-0.37	-6%	-1.86	-25%	7.49
ADA-ES	6.17	6.64	-0.47	-7%	0.02	0%	6.15
Calgon Carbon Corp	14.34	14.85	-0.51	-3%	0.26	2%	14.08
Capstone Turbines	1.20	1.32	-0.12	-9%	-0.08	-6%	1.28
Fuel Tech	7.84	8.41	-0.57	-7%	-0.46	-6%	8.3
				-5%		-2%	

Energy Management	1/22/2010	1/18/2020	Change	%	Change YTD	%	1/4/2010
Comverge	11.45	12.75	-1.3	-10%	0.15	1%	11.30
Echelon	9.64	10.83	-1.19	-11%	-2.13	-18%	11.77
EnerNOC	31.60	36.45	-4.85	-13%	0.55	2%	31.05
ESCO Technologies	32.86	34.86	-2.00	-6%	-3.49	-10%	36.35
Itron	64.05	70.30	-6.25	-9%	-4.87	-7%	68.92
Johnson Controls	29.48	29.33	0.15	1%	1.87	7%	27.61
Lime Energy	5.20	5.64	-0.44	-8%	0.67	15%	4.53
Orion Energy	5.16	5.50	-0.34	-6%	0.74	17%	4.42

Power Efficiency	0.27	0.30	-0.03	-10%	-0.01	-4%	0.28
Power Integrations	32.05	33.93	-1.88	-6%	-4.7	-13%	36.75
PowerSecure	6.09	6.76	-0.67	-10%	-1.2	-16%	7.29
Median				-8%		-2%	

Energy (Waste Heat) Recovery	**1/22/2010**	**1/18/2020**	**Change**	**%**	**Change YTD**	**%**	**1/4/2010**
China Energy Recovery	0.72	0.82	-0.10	-12%	-0.28	-28%	1.00
China Recycling Energy Corp.	4.68	4.60	0.08	2%	0.50	12%	4.18
Smart Heat	13.50	15.87	-2.37	-15%	-1.35	-9%	14.85
				-8%		-8%	

Energy Storage	**1/22/2010**	**1/18/2020**	**Change**	**%**	**Change YTD**	**%**	**1/4/2010**
A-One Storage System*	17.86	20.70	-2.84	-14%	-5.19	-23%	23.05
Active Power	0.98	1.07	-0.09	-8%	-0.12	-11%	1.10
Altair Nano	0.82	0.90	-0.08	-9%	-0.08	-9%	0.90
Ballard Power	2.37	2.55	-0.18	-7%	0.42	22%	1.95
C&D Technologies	1.46	1.77	-0.31	-18%	-0.15	-9%	1.61
China BAK Battery	2.70	2.85	-0.15	-5%	-0.2	-7%	2.90
ECOtality	4.81	5.60	-0.79	-14%	-0.69	-13%	5.50
Ener1	4.70	5.30	-0.60	-11%	-1.74	-27%	6.44
Enersys	21.01	22.57	-1.56	-7%	0.93	5%	20.08
Fuel Cell Energy	3.11	3.53	-0.42	-12%	-0.66	-18%	3.77
Hydrogenics	0.35	0.38	-0.03	-8%	-0.04	-10%	0.39
Maxwell Technologies	17.23	18.19	-0.96	-5%	-0.91	-5%	18.14
Mechanical Technology	0.81	1.08	-0.27	-25%	0.11	16%	0.70
Plug Power	0.57	0.68	-0.11	-16%	-0.17	-23%	0.74
Polypore International	13.30	11.98	1.32	11%	1.25	10%	12.05
Quantum Fuel Systems	0.89	1.13	-0.24	-21%	-0.21	-19%	1.10
Ultralife Batteries	4.68	5.40	-0.72	-13%	0.32	7%	4.36
Valence Technology	0.93	1.02	-0.09	-9%	-0.02	-2%	0.95
Median				-10%		-5%	

Geothermal	**1/22/2010**	**1/18/2020**	**Change**	**%**	**Change YTD**	**%**	**1/4/2010**
Calpine	11.34	11.37	-0.03	0%	0.26	2%	11.08
Magma Energy Corp.	1.76	1.84	-0.08	-4%	-0.07	-4%	1.83
Nevada Geothermal	0.88	0.97	-0.09	-9%	-0.12	-12%	1.00
Ormat Technologies	35.37	37.58	-2.21	-6%	-2.63	-7%	38.00
Ram Power*	3.53	3.70	-0.17	-5%	-0.7	-17%	4.23
Raser Technologies	1.06	1.18	-0.12	-10%	-0.14	-12%	1.20
US Geothermal	1.50	1.54	-0.04	-3%	-0.04	-3%	1.54
Median				-5%		-7%	

Rare Earth Minerals	**1/22/2010**	**1/18/2020**	**Change**	**%**	**Change YTD**	**%**	**1/4/2010**
5N Plus	5.42	5.43	-0.01	0%	-0.53	-9%	5.95
American Lithium	1.18	1.21	-0.03	-2%	0.6	103%	0.58
Avalon Rare Metals	2.62	2.97	-0.35	-12%	-0.34	-11%	2.96
Canada Lithium	0.55	0.52	0.03	6%	0.08	17%	0.47
Chemical & Mining Co. of Chile	39.64	42.02	-2.38	-6%	1.57	4%	38.07
Great Western Minerals	0.26	0.33	-0.07	-21%	-0.04	-13%	0.30
Neo Material Technologies	4.25	4.65	-0.4	-9%	-0.41	-9%	4.66
Rare Element Resources	3.80	4.01	-0.21	-5%	-0.39	-9%	4.19
Rodinia Minerals	0.61	0.62	-0.01	-2%	0.13	27%	0.48
Western Lithium	2.04	2.01	0.03	1%	0.59	41%	1.45
Median				-5%		14%	

Upstream Solar	**1/22/2010**	**1/18/2020**	**Change**	**%**	**Change YTD**	**%**	**1/4/2010**
OCI Co. Ltd.	201,500.00	203,000.00	-1500.00	-1%	-17500	-8%	219,000
Hoku Scientific	2.49	2.61	-0.12	-5%	-0.26	-9%	2.75
MEMC	13.19	14.15	-0.96	-7%	-0.74	-5%	13.93
PV Crystalox	60.05	64.00	-3.95	-6%	-1.95	-3%	62.00
REC	32.87	35.87	-3.00	-8%	-12.33	-27%	45.20
Tokuyama	514.00	549.00	-35.00	-6%	-4	-1%	518.00
Wacker Chemie	105.70	113.75	-8.05	-7%	-14.95	-12%	120.65
Median				-6%		-9%	

Midstream Solar	1/22/2010	1/18/2020	Change	%	Change YTD	%	1/4/2010
Ascent Solar	4.61	5.15	-0.54	-10%	-0.79	-15%	5.40
Canadian Solar	21.66	25.50	-3.84	-15%	-7.45	-26%	29.11
China Sunergy	4.12	4.90	-0.78	-16%	-0.62	-13%	4.74
Energy Conversion Devices	10.12	11.25	-1.13	-10%	-0.57	-5%	10.69
Evergreen Solar	1.44	1.58	-0.14	-9%	-0.1	-6%	1.54
First Solar	112.06	123.13	-11.07	-9%	-23.94	-18%	136.00
JA Solar	4.57	5.39	-0.82	-15%	-1.27	-22%	5.84
Kyocera	87.06	92.02	-4.96	-5%	-3.01	-3%	90.07
LDK Solar	6.52	7.16	-0.64	-9%	-0.57	-8%	7.09
Mitsubishi Electric	729.00	745.00	-16.00	-2%	36	5%	693.00
Motech Industries	125.00	136.00	-11.00	-8%	-27	-18%	152.00
Perfectenergy	0.43	0.45	-0.02	-4%	0.08	23%	0.35
Powerfilm	19.50	23.00	-3.50	-15%	-7.5	-28%	27.00
Q-Cells	10.01	11.20	-1.19	-11%	-1.58	-14%	11.59
Rene Sola	4.61	5.08	-0.47	-9%	-0.32	-6%	4.93
Sharp	1,145.00	1,195.00	-50.00	-4%	-35	-3%	1180.00
Sino-American Silicon	78.10	84.10	-6.00	-7%	-11	-12%	89.10
Solarfun	7.08	8.42	-1.34	-16%	-0.67	-9%	7.75
Solar Enertech	0.27	0.30	-0.03	-10%	0.01	4%	0.26
Solarworld	12.88	14.77	-1.89	-13%	-2.47	-16%	15.35
Sunpower	21.09	23.39	-2.30	-10%	-2.921	-12%	24.01
Suntech	13.02	15.51	-2.49	-16%	-3.9	-23%	16.92
Trina Solar*	20.93	24.98	-4.05	-16%	-7.57	-27%	28.50
Yingli Green Energy	12.63	14.96	-2.33	-16%	-3.43	-21%	16.06
Median				-11%		-11%	

*** Adjusted for 2:1 Forward-Split on January 20**

Downstream Solar & Developers	1/22/2010	1/18/2020	Change	%	Change YTD	%	1/4/2010
Akeena Solar	1.24	1.26	-0.02	-2%	-0.07	-5%	1.31
Carmanah Tech	0.80	0.83	-0.03	-4%	-0.05	-6%	0.85
Conergy	0.78	0.90	-0.12	-13%	0.12	18%	0.66
Acro Energy	0.50	0.44	0.06	14%	0.2	67%	0.30
Phoenix Solar	32.25	37.45	-5.2	-14%	-9.68	-23%	41.93
Premier Power	2.47	2.52	-0.05	-2%	-0.28	-10%	2.75
Real Goods Solar	3.35	3.51	-0.16	-5%	0.11	3%	3.24
Solar Power	1.17	1.30	-0.13	-10%	-0.09	-7%	1.26
Median				-4%		5%	

Solar Equipment/Systems	1/22/2010	1/18/2020	Change	%	Change YTD	%	1/4/2010
Amtech Systems	10.97	11.71	-0.74	-6%	0.02	0%	10.95
BTU International	5.92	6.39	-0.47	-7%	-0.87	-13%	6.79
Emcore	1.03	1.08	-0.05	-5%	0	0%	1.03
GT Solar	6.10	5.83	0.27	5%	0.49	9%	5.61
Spire	4.43	5.19	-0.76	-15%	-0.92	-17%	5.35
Satcon Technology	2.36	2.62	-0.26	-10%	-0.44	-16%	2.8
Median				-5%		-6%	

Water Treatment & Infrastructure	1/22/2010	1/18/2020	Change	%	Change YTD	%	1/4/2010
American Water Works	22.06	22.69	-0.63	-3%	-0.35	-2%	22.41
Aqua America	17.14	17.64	-0.5	-3%	-0.33	-2%	17.47
Cadiz	11.54	10.97	0.57	5%	-0.63	-5%	12.17
Consolidated Water Co.	12.91	13.69	-0.78	-6%	-1.6	-11%	14.51
Energy Recovery	6.36	6.87	-0.51	-7%	-0.53	-8%	6.89
Mueller Water Products	4.96	5.25	-0.29	-6%	-0.28	-5%	5.24
Ocean Power Technologies	6.94	8.85	-1.91	-22%	-2.19	-24%	9.13
Watts Water	31.28	32.32	-1.04	-3%	0.01	0%	31.27
York Water	13.60	14.02	-0.42	-3%	-1.09	-7%	14.69
Median				-5%		-7%	

Wind	1/22/2010	1/18/2020	Change	%	Change YTD	%	1/4/2010
A-Power Energy	12.31	16.30	-3.99	-24%	-6.43	-34%	18.74
American Superconductor	36.54	40.15	-3.61	-9%	-5.01	-12%	41.55
Acciona	90.20	96.00	-5.8	-6%	-1.71	-2%	91.91
Broadwind Energy	5.46	5.90	-0.44	-7%	-2.73	-33%	8.19
Gamesa	10.97	12.22	-1.25	-10%	-0.94	-8%	11.91
Nordex	9.83	10.81	-0.98	-9%	-0.59	-6%	10.42
Otter Tail	22.80	23.74	-0.94	-4%	-2.2	-9%	25.00
REpower Systems AG	119.00	138.50	-19.5	-14%	-7.4	-6%	126.40
Siemens	87.50	94.67	-7.17	-8%	-6.71	-7%	94.21
Suzlon	79.40	90.00	-10.6	-12%	-12.1	-13%	91.50
Vestas	39.86	44.26	-4.4	-10%	-2.96	-7%	42.82
Zoltek	8.81	9.50	-0.69	-7%	-0.82	-9%	9.63
Median				-10%		-12%	

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