Bloomberg BRIEF

Clean Energy & Carbon

NEWS, ANALYSIS AND COMMENTARY FROM BLOOMBERG NEW ENERGY FINANCE

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CLEAN ENERGY & CARBON WATCH

FRANCE. The nation is taking bids to build large-scale solar power plants for the second time to bolster its weak PV sector. Page 3

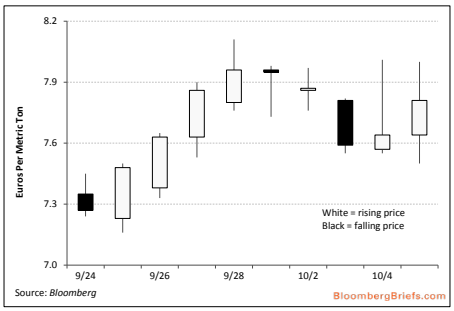
ASIA. Germany's biggest solar company by market value is preparing to supply Japan's largest solar plant with its products. Page 5

BEYOND CARBON. Sustainability projects can "add value" to corporations, says Sarah Collins, founder of Natural Balance. Page 9

FOCUS. Coastal wetlands are more efficient than tropical forests at storing CO2, according to scientists who are pushing for financial incentives to keep them intact. Page 10

EU CO2 MAY FALL TO 6.80 EUROS THIS WEEK. Bloomberg New Energy Finance expects prices to fall on likely delays to the backloading proposal. Page 8

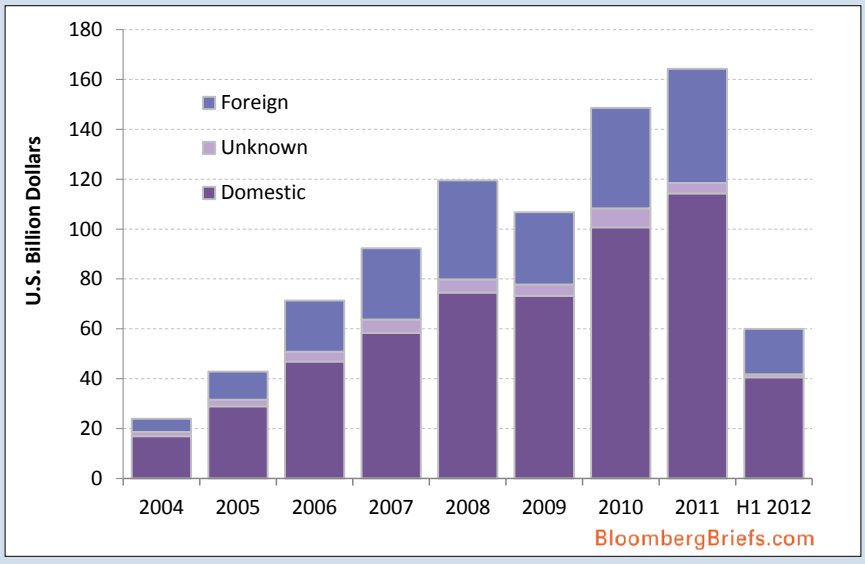
EU CARBON PRICE PER METRIC TON



MARKETS

	PRICE	WEEK CHANGE
Spot Polysilicon Avg. ($/kg)	19.64	-0.56%
Corn ($/Bushel)	7.43	-0.77%
Ethanol ($/gallon)	2.5375	+2.77%
Palm (MYR/ton)	2161.5	-9.73%
Biodiesel (€/metric ton)	866.35	0.00%
Front Month Brent ($/bbl)	112.02	-0.33%
2013 ARA Coal ($/t)	97.5	-0.20%
WIN12/13 UK NBP (p/th)	64	-2.14%
2013 DE base (€/MWh)	48.05	+0.52%

Over Two-Thirds of Asset Financings, or $114 Billion, Came From Companies Investing in Home Markets



Source: Bloomberg New Energy Finance

Bloomberg New Energy Finance estimates that of the $164 billion of asset finance worldwide in 2011, some $45.8 billion was deployed across borders. See Insight on Page 12

Sustainability's 'Behind the Scenes,' Hilton Says

BY SIOBHAN WAGNER,
BLOOMBERG NEW ENERGY FINANCE

Many hotel guests prefer their accommodation to have environmentally-friendly practices, though few vacationers are willing to "dramatically change their behavior" in the name of sustainability, said **Paul Brown**, president of brands and commercial services for **Hilton Worldwide Inc**.

Brown said Hilton is maintaining its luxury brand while curbing energy use, investing in renewable power and cutting water consumption "behind the scenes" without impacting guest experiences.

The **Blackstone Group LP**-owned hospitality company rolled out a web-based system dubbed LightStay in 2008 to track metrics including energy, waste and water across some 3,900 hotels in 91 countries.

The hotel has cut 23 percent of waste, 10 percent of energy use and 7.5 percent of water consumption since the introduction of LightStay, according to its 2011 results released last month.

Brown told Clean Energy & Carbon Brief this has saved Hilton around $147 million.

Hilton is purchasing 315 million kilowatt-hours of renewable energy certificates annually, covering 94 percent of the electricity used in owned hotels in the U.S.

Q: Do luxury and sustainability conflict in any way?

A: Not in the way we're approaching it. The way we are approaching sustainability is to take steps to reduce consumption as much behind the scenes as possible. A lot of customers see environmental sustainability as important to them and they would like to do business with companies that are doing the right thing from a sustainability standpoint. A significant minority of guests are willing to dramatically change their behavior in a hotel in the name of sustainability. If you seem to be preaching to customers or creating

continued on next page

SUSTAINABILITY'S 'BEHIND THE SCENES,' HILTON SAYS...

continued from previous page

inconvenience to the guest in the name of sustainability, you start seeing potential conflicts. We have found a huge amount of opportunity to make progress on reducing our environmental impact without impacting the guest experience at all. In fact some of the things we're doing have had positive implications on the guest experience by providing them with different ways to interface with us.

Q: So what are you doing to reduce your impact behind the scenes?

A: One is the Hilton New York. It has established a 1.7 megawatt cogeneration plant to produce power for the hotel, which has no impact on the guests. They've also added a vegetation roof to reduce runoff in the building and they've upgraded to LED displays in all of the public areas. That has some significant impact on reducing our environmental impact, but none of those have a direct impact on the customer in a negative way. The Hilton Americas Houston in Texas has converted to use biodiesel as an alternative fuel wherever feasible. And in fact in one year this hotel has recycled 14,000 pounds of kitchen oil and diverted 7 tons of oil-based food waste from the local landfill because they have been converting that into biofuel. The Hilton Fort Lauderdale Beach Resort has installed a wind turbine on top of the hotel, and that turbine produces 24,000 kilowatt-hours of energy. The one I really like is Hilton in Slussen, Sweden where they have changed the way they dispose of waste, recycling a lot of the waste or being much smarter about the waste leaving the hotel. They have reduced the amount going to the landfill by 95 percent over the past couple of years.

Q: What are you doing to reduce water consumption in your hotels?

A: Water is quite honestly one of the harder ones to impact before you start relying on the guests to change their behavior. What we have done up to this point is working on water recirculation, so where possible resorts and other hotels are re-circulating water versus drawing off new water. We're saving water runoff where possible to reuse for irrigation purposes, and going for low-flow shower heads. [There is] a point where you can go so far you are running into negative guest impacts. There are other things we can do behind the scenes. At some point though, a lot of the water utilization by a hotel is driven by what guests are doing.

Q: Do you think some hotels' sustainability efforts can be misconstrued as just a cheap way to cut corners?

A: That is a delicate balancing act. We've been very careful. We don't use sustainability as the reason for things like putting your towels up or not having your room cleaned. Whereas others say that is the reason they are doing it. People see through that. Also, we don't shout from the rooftops to consumers what we're doing. We're very focused on: let's get it right ourselves, let's do the right thing, reduce our environmental impact because it's the right thing to do, let's save money where we possibly can. Ultimately if we're doing the right thing, the guests who care about that will steer their business our way.

Q: How much will the longevity of Hilton depend on the sustainability efforts you are putting into place today?

A: I think it will have quite a bit to do with it. And it's not just sustainability from energy utilization or water but it's also sustainability from our impact on the communities in which we do business. It is vital for the travel and tourism industry to pay very close attention and to be very serious about these efforts because we depend as an industry on having the places people want to go and we have to treat those as precious assets – whether it be the community itself in which we're doing business or obviously the natural environment around it. I don't really think there are any industries where sustainability efforts are more important than in the travel and tourism industry. I can say that as Hilton is one of the largest, it's critically important, but I think quite honestly it's important for the entire industry. Not just us as a company.

AT A GLANCE

How green are you outside work? I've always made sure I live close to work. Apart from the convenience standpoint, there is a nice byproduct of that you do not spend a lot of time in the car.

Your favorite hotel luxury? You can tell a great luxury hotel when you feel the sheets and they have that right degree of being a little bit cool to the touch.

Your preferred Hilton? I am very partial to the Waldorf Astoria in Shanghai. It's not only luxurious but it is a great juxtaposition of old and new.

Bloomberg Brief Clean Energy & Carbon

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POLICY, SCIENCE

Australia in Talks With California to Link Emission Programs

Australia said it agreed to work with the state of California to promote global emission markets.

Mark Dreyfus, Australia's secretary for climate change and energy efficiency, has set up an "ongoing working relationship" with the California Environmental Protection Agency and the California Air Resources Board, according to a release from his office. Dreyfus is in the U.S. for clean energy and climate talks, according to the release.

The largest U.S. state has been at the forefront of American efforts to reduce carbon pollution, said Dreyfus, who is attending the Major Economies Forum on Climate and Energy in New York. California's cap-and-trade program starts on Jan. 1, 2013, and its first auction of carbon allowances is scheduled for November.

Australia began charging about 300 of its largest emitters a fixed price of A$23 ($24) a metric ton for their greenhouse gas emissions on July 1. The country is scheduled to start a cap-and-trade system in 2015. It abandoned an attempt to set a minimum price for carbon permits and announced Aug. 28 it was linking to the European Union market, laying the groundwork for global emissions trading.

California's Air Resources Board isn't actively considering a link to Australia's program that would allow companies in the two jurisdictions to trade carbon allowances and offsets across borders, Dave Clegern, a spokesman for the board in Sacramento, said by e-mail. "We're more focused on learning from each other at this point as we inaugurate our programs," Clegern said. "The ongoing relationship with Australia provides us both with the opportunity to share experience and information as our programs develop.

– Mike Anderson and Lynn Doan

EU Parliament CO2 Vote Date Is 'Fastest Possible,' Groote Says

The European Parliament will hold its first vote on a proposed change to the bloc's emissions trading law that could enable curbing an oversupply of permits on Feb. 19, 2013, according to the parliament's website.

The vote will be held in the parliament's Environment Committee. The planned February vote is the "fastest possible" timetable, the head of the panel said.

The committee will vote on the measure and the plenary vote that needs to follow will take place "as soon as possible" after European Union governments agree on their position, **Matthias Groote**, the chairman of the environment committee, said in a telephone interview.

Groote last month was appointed to steer the draft amendment through the assembly. The legal change would enable the EU's regulatory arm to propose delaying a certain number of permits at carbon auctions as of 2013 to curb oversupply.

– Ewa Krukowska

Italian Power From Wind, Solar Beat Government Target in 2011

Renewable power generation in Italy rose by 8 percent to 82,961 gigawatt-hours in 2011 as more solar and wind projects came online, the government's renewable energy regulator said.

Renewables accounted for 23.5 percent of final electricity demand in Italy as solar photovoltaic power, along with wind and bioenergy, compensated for a drop in hydropower, the agency known as Gestore Servizi Energetici said Oct. 2 in an e-mailed statement. That exceeded the government's 19.6 percent target, according to a report on the GSE website.

Italy last year had a boom in solar panel sales, becoming the world's biggest market with almost 9,300 megawatts of new installations. Total installed renewable power capacity rose to 41,399 megawatts in 2011 from 30,284 a year earlier, GSE said.

– Alex Morales

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France Plans Tender for Large Solar Plants

France will take bids to build large-scale solar power plants for the second time as well as increase support for smaller projects to sustain the renewable-energy industry.

The French ministry of environment, sustainable development and energy will open the process before the end of the year, earlier than planned, it said in a statement. The ministry, which grants premium rates to plants with more than 250 kilowatts of capacity, will continue with quarterly tenders for projects with 100 kilowatts to 250 kilowatts and increase the targets and rates for smaller plants.

The new round, which follows an auction that saw plants with a combined 520 megawatts selected July 27, comes earlier than planned. The previous government said it would start the next tenders for photovoltaic projects in 2014 and 2015.

France introduced a new system of so-called reverse-auction tenders in March 2011 for all large solar projects, aiming to limit growth. Under this system, developers place bids that include a long-term purchase price for their power. Those offering the lowest rates are more likely to be selected.

– Marc Roca

BNEF says: The environment and energy minister says that the measures will bolster its weak photovoltaic sector. Although this is a positive signal to the local players, our expectations for France do not exceed the 1 gigawatt mark for 2013. This is unless the government gets rid of the 200 megawatts cap it currently imposes on systems smaller than 100 kilowatts. Ultimately, the big decision will come down to whether the nation will effectively decommission its old nuclear reactors and reduce its nuclear load to 50 percent from the current 78 percent, as its president announced in a recent environmental conference held in France.

POLICY, SCIENCE...

continued from previous page

Saudi Arabia Said to Order Airline to Reject EU Carbon Rules

Saudi Arabia ordered its national airline not to comply with European Union emissions-trading rules in protest against the bloc's decision to include non-EU carriers in its carbon market, two people with knowledge of the matter said.

The kingdom, OPEC's biggest oil producer, has notified the 27-member bloc of the decision and discussions are ongoing to reach a compromise, said the people, who declined to be identified because the information isn't public.

Saudi Arabia was one of the countries including the U.S., China, and India that issued a joint statement in February opposing the EU law, which obliges airlines flying into and out of the bloc to report the carbon-dioxide pollution from their flights and surrender EU permits matching those emissions every year starting in 2012.

"The EU thinks that, with time, the charges levied on us will become normal and acceptable. We wanted to make sure to send them a message that the case will not end easily," **Mohammed al-Sabban**, an independent energy consultant and a former Saudi chief climate negotiator who represented the country in issuing the joint communique, said Sept. 28 by phone. State-owned Saudi Arabian Airlines is the only Saudi-based carrier that travels to Europe.

Officials from the group of 29 nations who signed the communique may gather early next year in Jeddah to follow up on earlier meetings, one of the people said.

The inclusion of airlines in the EU emissions trading system is a unilateral action taken outside the United Nation Framework Convention on Climate Change, al-Sabban said in an interview from Jeddah. Most Arab countries, as well as U.S., Canada, China, India, and Russia, hold views similar to those of Saudi Arabia, he said.

– Wael Mahdi

U.K. to Include Solar in Renewable-Power Strategy for First Time

The U.K. will include solar power in its renewable-energy strategy this year for the first time, according to a government official.

Solar will appear in the so-called renewables road map, **Alasdair Grainger**, in charge of feed-in tariffs at the Department for Energy and Climate Change, said in Birmingham. The government will also unveil a detailed strategy for photovoltaics in the next few months, he said.

The road map, Britain's annual policy update for clean power, has so far only included technologies such as wind energy. The document is expected in late October, according to Ray Noble, a consultant for the Solar Trade Association.

– Marc Roca

Japan May Meet Kyoto Emissions Cut Target, Ministry Estimates

Japan is on target to cut greenhouse gas emissions by an estimated average of 8 percent for the five years ending in March, meaning it will meet commitments under the Kyoto Protocol, the environment ministry estimated.

Kyoto's binding obligations limiting the release of emissions among industrial nations stipulate Japan must cut greenhouse gas output by 6 percent from 1990 levels for fiscal 2008-2012. Emissions are projected to be 1.277 billion metric tons for fiscal 2011 and 1.316 billion tons in the twelve months ending March 31, 2013, **Kentaro Doi**, a ministry official in charge of emissions data, said by phone Oct. 5.

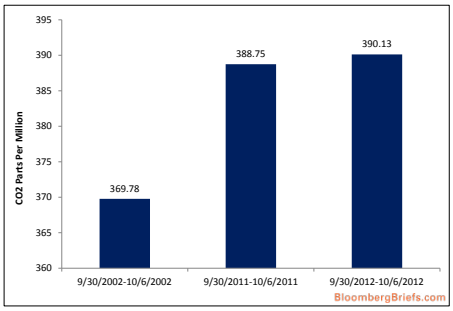
After taking into account the absorption of carbon dioxide by forests and credits earned for offsets outside the country, Japan's emissions are projected to be an average of 8 percent below 1990 levels, Doi said.

The internal estimates were produced by the ministry after the Institute of Energy Economics, Japan, released an energy demand outlook in July, he said. The ministry's estimates were earlier reported by the Yomiuri newspaper.

– Chisaki Watanabe

CO2 in Atmosphere

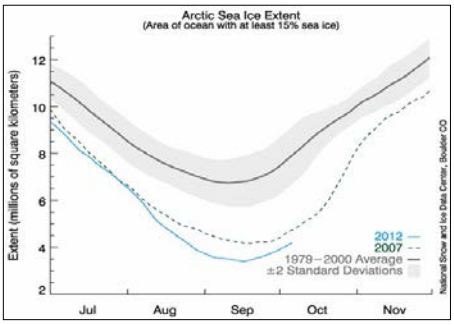
Carbon dioxide concentration levels are increasing at an accelerating rate decade to decade. Scientists say returning to an atmospheric CO2 concentration below 350 parts per million is needed to avoid climate change.



Source: NOAA/ESRL

Arctic Sea Ice

Arctic sea ice shrunk to a record low seasonal minimum extent on Sept. 16. This graph compares the daily sea ice extent for the year until Oct. 6 with the 1979 to 2000 average and the year with record low ice extent, 2007.



Source: NSIDC

SCIENCE BUZZ

- Plants' ability to absorb increased CO2 levels in the air may have been overestimated, a University of Minnesota study shows. It says plants may not get enough nutrients from typical soils to absorb the CO2 that scientists previously estimated.

- Sea-level is expected to rise for a long time, even after stabilization of manmade climatic warming, according to a study in Environmental Research Letters. The planet is already on course for a total sea-level rise of 1.1 meters by the year 3000.

DEALS

Veolia, EDF Unit Opens France's Largest Wood Heat, Power Plant

A unit of **Veolia Environnement SA**, the biggest water utility, and **Electricite de France SA** opened the country's largest heat and power biomass facility at a production plant of papermaker **Smurfit Kappa Group Plc**.

The plant that will produce electricity and heat from wood in the Aquitaine region of southwest France has a 69-megawatt capacity. EDF will buy the power and Smurfit will use the steam to dry paper, Paris-based **Dalkia SAS** said Oct. 3 in a statement.

"This facility, which is of a rare size, has enabled us to put in place a regional supply chain for wood energy and to create 94 direct jobs: 24 jobs at the plant itself and 70 in the supply chain," Dalkia Chairman **Franck Lacroix** said.

France seeks to double energy generation from biomass by 2020 and in March confirmed support for 15 large-scale biomass projects that will total 420 megawatts and involve 1.4 billion euros ($1.8 billion) in investment.

– Louise Downing

Hydrogenics $92 Million Fuel-Cell Sale Is Largest Order to Date

Hydrogenics Corp., a Canadian fuel-cell maker, agreed to sell as much as $92 million of hydrogen propulsion systems to an unidentified customer, its largest contract to date.

The sale includes a $36 million design and manufacturing contract and $13 million of equipment, Mississauga, Ontario-based Hydrogenics said Oct. 3 in a statement. The customer may also buy as much as $43 million of hardware and services over 10 years.

– Ehren Goossens

Terra Firma's Infinis Gets Australian Finance for U.K. Wind

Infinis Plc, the renewable-energy developer owned by Guy Hands's **Terra Firma Capital Partners Ltd.**, got a 75 million-pound ($121 million) loan from **National Australia Bank Ltd.** for a group of U.K. wind farms.

The loan will finance the construction and operation of five onshore projects with a combined capacity of 52.5 megawatts, Northampton, England-based Infinis said Oct. 2 in a statement. It expects the projects to be operating by March.

The U.K., which through its so-called Renewables Obligation program offers premium payments for clean energy, is attracting investors from overseas. **Mainstream Renewable Power Ltd.**, an Irish developer, signed a 60 million-euro ($77 million) loan agreement with Australia's **Macquarie Group Ltd.** last month to help fund its U.K. offshore wind parks.

– Sally Bakewell

Lanzatech Borrows $15 Million to Turn Waste Gases Into Fuel

Lanzatech NZ Ltd., an Auckland-based biotechnology company, received a $15 million loan to develop transportation fuels and chemicals from waste industrial gases.

Western Technology Investment, a Portola Valley, California-based venture capital company, provided the financing, closely held Lanzatech said Oct. 3 in a statement.

The loan follows the $55.8 million Series C financing round Lanzatech closed in January, led by the **Malaysian Life Sciences Capital Fund LP**, and brings the company's total funding to more than $100 million, according to the statement.

– Andrew Herndon

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SMA Solar Supplies Largest Japanese Solar-Power Plant

SMA Solar Technology AG, Germany's biggest solar company by market value, said it will supply Japan's largest solar plant with its products.

SMA will supply the 70-megawatt project operated by **Kagoshima Mega Solar Power Corp.** in Kagoshima City in southern Japan with inverters, the company said Oct. 4 in an e-mailed statement. Construction started last month and is due to be completed by the fall of 2013, SMA said. "The introduction of a feed-in tariff for solar power three months ago and the decision of the government to phase out nuclear power by 2040 announced last month underline Japan's desire to establish itself as a major market for photovoltaics worldwide," Chief Executive Officer **Pierre-Pascal Urbon** said. "In the coming years, we expect strong growth in all market segments."

– Stefan Nicola

BNEF says: There are a swelling number of non-Japanese inverter manufacturers entering the Japanese market. Many manufacturers offer higher conversion efficiency over their Japanese competitors. SMA, the largest photovoltaic inverter manufacturer with 4 gigawatts of global sales in the first quarter of 2012, was one of the first western inverter manufacturers to attain the notoriously long and complicated certification process from the Japanese Electrical Safety and Environment Technology Laboratories for 10 kilowatts and below applications. Still, equipment for utility scale projects such as this depend on negotiations with the utility, and this large order helps to dispel rumors of preference for Japanese inverters in this market.

DEALS...

continued from previous page

AT&T Agrees to Buy 9.6 Megawatts of Bloom Energy's Fuel Cells

AT&T Inc., the largest U.S. phone company, will buy 9.6 megawatts of fuel cells from **Bloom Energy Corp.** to make its power costs more predictable.

AT&T is now Bloom's largest non-utility customer, according to a statement. Dallas-based AT&T bought 7.5 megawatts of the so-called Bloom Boxes in July 2011.

Bloom's systems use a chemical reaction to generate electricity from air and natural gas at a constant rate. That helps users manage their power expenses, according to AT&T's Senior Energy Director **John Schinter**.

"They provide steady, recurring electricity production at a relatively predictable cost, replacing the traditional electricity bill, which can be volatile," he said in the statement. AT&T didn't give a price for the purchase.

Power from Bloom's systems costs "a good bit more" than electricity purchased from utilities, Ted Hesser, an analyst for Bloomberg New Energy Finance in New York, said in an interview. "Presumably, they're getting a more reliable source of energy so they're willing to pay a premium."

– Ehren Goossens

Italy's Maccaferri to Build 10 Small Hydropower Plants in Serbia

Italy's **Maccaferri Group** will start building 10 small hydropower plants in Serbia by mid-2013, Serbian Prime Minister **Ivica Dacic**'s office said Oct. 5.

The plants along the Ibar River will cost 350 million euros ($455.35 million) to build, Dacic's office said in an e-mailed statement. It's 'the first part of a strategic project for the construction of hydropower capacities in Serbia and the Bosnian Serb republic worth 2 billion euros."

Maccaferri Group's **Seci Energia SpA** and Serbia's state-run power monopoly **Elektroprivreda Srbije** first signed a deal in February 2011 to develop plants along the border between Serbia and Bosnia-Herzegovina, as part of Italy's effort to meet a goal of deriving 17 percent of power consumption from renewable sources by 2020.

– Gordana Filipovic

ContourGlobal Building $250 Million Peru Wind-Energy Projects

ContourGlobal LLC, a closely held U.S. energy developer with operations on four continents, is investing $250 million to build two wind farms in Peru.

The Cupisnique and Talara projects will have total capacity of 114 megawatts and are expected to begin producing power in the third quarter of next year, New York-based ContourGlobal said in a statement Oct. 3. The developer purchased the projects from **Energia Eolica SA** and they are already under construction.

– Stephan Nielsen

Estover Plans Three U.K. Wood-to-Power Plants for $354 Million

Estover Energy Ltd. plans to invest 220 million pounds ($354 million) to build three plants in Scotland and England that generate heat and power from wood.

The U.K. renewable-power developer applied for planning permission for the 52 megawatts of facilities, **Max Aitken**, a director at Edinburgh-based Estover, said by e-mail. It plans to build two of the plants in Scotland and the other in Northumberland, with construction starting in 2013 if approved.

Estover aims to raise debt to fund the projects, which will use wood grown nearby to generate heat and power, Aitken said. The company also plans a further three facilities, he said.

The U.K. expects 15 percent of its energy to come from renewable sources by 2020 compared with 9.4 percent now. The government estimates as much 30 percent of that may come from biomass plants that use municipal waste, wood and straw.

– Louise Downing

SHARE PRICES OF CLEAN ENERGY COMPANIES BY REGION

Americas

COMPANY	10/05/12	9/28/12	WEEKLY CHANGE	% CHANGE
Archer-Daniels Midland Co.	28.21	27.18	1.03	3.79%
Bunge Ltd.	68.44	67.05	1.39	2.07%
First Solar Inc.	20.07	22.145	-2.075	-9.37%
General Electric Co.	23.12	22.71	0.41	1.81%
SunPower Corp.	4.53	4.51	0.02	0.44%
Tesla Motors Inc.	28.89	29.28	-0.39	-1.33%

Asia and Oceania

COMPANY	10/05/12	9/28/12	WEEKLY CHANGE	% CHANGE
GS Yuasa Corp.	324	325	-1	-0.31%
Sinovel Wind Group Co.	5.79	5.79	0	0.00%
Suntech Power Holdings Co.	0.95	0.86	0.09	10.47%
Suzlon Energy Ltd.	17.55	17.75	-0.2	-1.13%
Trina Solar Ltd.	4.62	4.58	0.04	0.87%
Xinjiang Goldwind Sci&Tec-H	2.82	2.65	0.17	6.42%

Europe, Middle East and Africa

COMPANY	10/05/12	9/28/12	WEEKLY CHANGE	% CHANGE
Abengoa SA	3.255	2.727	0.528	19.36%
GKN Plc	226.3	214.8	11.5	5.35%
Schneider Electric SA	50.42	46.055	4.365	9.48%
SolarWorld AG	1.466	1.53	-0.064	-4.18%
Q-Cells SE	0.06	0.063	-0.003	-4.76%
Vestas Wind Systems A/S	37.32	41.24	-3.92	-9.51%

Note: Market price is shown in local currency

CARBON MARKETS

EU Mulls Allowing Carbon Offset Swaps From May, Draft Shows

The European Union is considering from May 1 allowing emitters to swap international carbon offsets into EU allowances eligible for compliance in the next phase of the region's emissions market.

Manufacturers, utilities and airlines in the EU program will be able to request until the end of March 2015 to swap offsets generated for emission reductions before 2012, the European Commission, the bloc's regulatory arm, said in a draft revision of the EU carbon registry regulation obtained by Bloomberg News. In the third phase of the EU emissions trading system, which starts next year, companies will need to exchange imported carbon-reduction credits into EU permits before surrendering them for compliance.

International credits for cutting greenhouse gases from 2013 onward would be exchanged until the end of 2020, the commission said. The measure has been submitted to member states for talks and needs approval from governments.

The EU law allows about 12,000 factories and power plants in the bloc's emissions trading system to use United Nations offsets as a cheaper way to comply with pollution quotas. The rules of the program will tighten from next year when emitters will be permitted to use UN credits from new projects only as long as they are based in least developed countries.

– Ewa Krukowska

'Massive' Influx of Carbon Offsets Helped Cut Prices, EU Says

A "massive" influx of United Nations carbon offsets into the European Union's emissions program boosted the surplus in the bloc's market and helped cut prices, a senior EU official said.

UN Certified Emission Reduction credits, or CERs, accounted for around half of the 950 million metric ton carbon-dioxide glut in the EU emissions trading system at the end of 2011, **Jos Delbeke**, the EU's director general for climate, said.

"We have a quantitative limit until 2020 and what we see today is most of the CERs are coming right into the European market now," he said, speaking at the General Assembly of the Zero Emissions Platform.

– E.K.

California's Trading Provision Delay Allays FERC Concerns

California's decision to postpone enforcement of a provision against "resource shuffling" in its greenhouse gases trading program has alleviated concerns raised by a federal energy regulator, California Air Resources Board Chairman **Mary Nichols** said Oct. 2.

Nichols said she met with Federal Energy Regulatory Commission officials Oct. 1 after Commissioner **Philip Moeller** criticized California's greenhouse gas emissions trading program for not adequately defining resource shuffling in an Aug. 6 letter. California's greenhouse gas program requires electricity traders to affirm under penalty of perjury that they have not delivered renewable or other low-emissions sources of power to California's grid in lieu of previously contracted electricity produced from carbon-intensive sources, like coal, while selling the high-carbon electricity outside of the state.

"It seemed like there could be a problem if we were requiring people to take an oath that they hadn't done something when we hadn't given them a very clear definition of what it was that they were prohibited from doing," Nichols said.

California plans to postpone enforcement of the resource shuffling provisions for 18 months while it develops guidance that clearly defines the practices that would satisfy Moeller's concerns, Nichols said.

Moeller had said in his letter that the uncertainty about resource shuffling could prompt out-of-state energy resources not to sell power to the state's electricity market, which could disrupt supplies throughout the West.

– Bloomberg BNA

SHARE PRICES OF UTILITY EMITTERS IN EUROPE

COMPANY	10/05/12	9/28/12	WEEKLY CHANGE	% CHANGE
RWE AG	35.87	34.815	1.055	3.03%
E.ON AG	18.585	18.465	0.12	0.65%
Enel SpA	2.896	2.752	0.144	5.23%
EDF SA	16.735	16.305	0.43	2.64%
Public Power Corp SA	4.14	3.64	0.5	13.74%
GDF Suez	17.955	17.4	0.555	3.19%
CEZ AS	731.3	729.9	1.4	0.19%
Iberdrola SA	3.787	3.528	0.259	7.34%
ENI SpA	17.41	17.02	0.39	2.29%
Tauron Polska Energia SA	4.89	4.9	-0.01	-0.20%
EDP - Energias de Portugal SA	2.141	2.142	-0.001	-0.05%
Drax Group PLC	518.5	507	11.5	2.27%

Note: Market price is shown in local currency

SHARE PRICES OF INDUSTRIAL EMITTERS IN EUROPE

COMPANY	10/05/12	9/28/12	WEEKLY CHANGE	% CHANGE
ArcelorMittal	11.395	11.16	0.235	2.11%
Total SA	38.73	38.6	0.13	0.34%
Tata Steel Ltd	410.55	400.9	9.65	2.41%
HeidelbergCement AG	41.995	40.77	1.225	3.00%
Royal Dutch Shell Plc	26.89	26.9	-0.01	-0.04%
Exxon Mobil Corp	92.55	91.45	1.1	1.20%
Lafarge SA	43.85	41.91	1.94	4.63%
Italmobiliare SpA	9.48	9.725	-0.245	-2.52%
BP Plc	436.75	436.5	0.25	0.06%
Holcim Ltd	63.25	59.9	3.35	5.59%
Statoil ASA	146.5	147.9	-1.4	-0.95%
Repsol YPF SA	15.15	15.09	0.06	0.40%

Note: Market price is shown in local currency

CARBON MARKET COMMENTARY

Weekly Commentary from Bloomberg New Energy Finance

EUAs Bearish After Delays to Supply Curb Plans

BY KONRAD HANSCHMIDT, BLOOMBERG NEW ENERGY FINANCE

European Union Allowances may decline this week, on the back of increasingly likely delays to the bloc's proposal to reduce oversupply of permits. Last Thursday, the European Parliament's environment committee announced plans to vote on the measure in Feb. 2013 – later than traders had expected. EUAs for December 2012 fell 1.8 percent over last week as a whole, to close at 7.81 euros a metric ton on Friday. Prices will trade between 6.80 and 8.10 a metric ton over the next five days, according to Bloomberg New Energy Finance projections.

FROM BACKLOADING TO AUCTIONS

The first official political decisions regarding "backloading" are increasingly likely to take place after the start of full auctioning in January 2013. The backloading proposal would push some carbon permit supply into the later part of this decade, altering the near-term supply-demand balance and potentially boosting prices.

As a result of these delays, EUA prices will come under increased bearish pressure in Q4 2012 and Q1 2013, with auctioning volume becoming a more important driver of prices than backloading.

NEW DECISION TIMELINE

Last week's announcement from the Parliament's environment committee has pushed back the estimated adoption date of a change to the EU emission-trading directive. The Parliament and Council are now expected to vote in March 2013, meaning that the legislation would be officially adopted at the start of April.

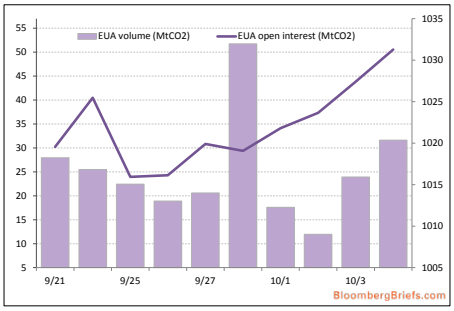
The crucial question is how negotiations over the EU Auctioning Regulation develop in parallel. The Climate Change Committee may vote on the new regulation before the Parliament but then delay the start of the three-month scrutiny period, according to reports by Bloomberg News last Friday. Such a scenario could enable the backloading plan to become official in mid-July. Thereafter it would depend on how quickly the commission adjusts volumes, with potential curbs in Q4 2013.

If the Committee votes after the Parliament, backloading may not begin until 2014. A survey of carbon traders by Bloomberg New Energy Finance reflected the declining chances of auctioning delays inside 2013. Last Friday, respondents considered there was a 46 percent probability of supply curbs on average, compared with 67 percent three weeks ago.

UN CREDIT ISSUANCES LOOKING TO SOAR

Issuances of Certified Emission Reduction credits over the last four weeks have remained below the 10-week moving average, partly due to a lack of volume from industrial gas projects. They are now projected to pick up significantly, with a total of 15.8 million metric tons forecast for the next three weeks, says Bloomberg New Energy Finance. The expected increase in supply may push down CER prices, as will any additional volume of Emission Reduction Units from Russia or Ukraine. The market is particularly sensitive to issuance volumes at present, as shown when CER prices dropped 14 percent last Wednesday around the time there was an influx of ERUs according to traders.

EU Carbon Trading Volumes



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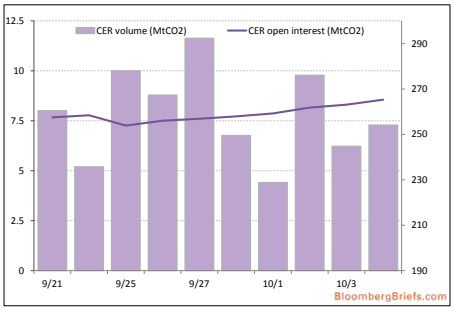
UN Carbon Trading Volumes



Source: EMIS <GO>

MARKET ACTIVITY LAST WEEK

DAY	EUA	CER	SPREAD	COMMENT
MONDAY	€7.95	€2.18	€5.77	European Commission threatens ERU ban
TUESDAY	€7.87	€2.05	€5.82	Commission discusses EUA cancellation
WEDNESDAY	€7.59	€1.76	€5.83	Oil prices fall on U.S. oversupply concerns
THURSDAY	€7.64	€1.79	€5.85	European Parliament announces that first committee vote will be in Feb. 2013
FRIDAY	€7.81	€1.83	€5.98	EUAs rise again on Commission claim that Parliament vote could happen earlier

INSIDER

Beanbag Cookers in Africa Find a Place in Carbon Markets

A non-electric slow cooker that looks like a beanbag will help alleviate poverty and reduce emissions in Africa, according to the product's inventor **Sarah Collins**, founder of social enterprise **Natural Balance**. Collins said around 600,000 of the Wonderbag cookers have been distributed across South Africa. Natural Balance has a distribution partnership with **Unilever**, she said. Collins tells Siobhan Wagner of Bloomberg New Energy Finance the idea has appealed to the likes of **Microsoft Corp.**, which has purchased carbon credits generated by the bags to offset the company's emissions.

Q: How does Wonderbag help alleviate poverty?

A: In most parts of Africa, there are very limited [fuel] resources. People are being forced to look at alternative ways of cooking or to skip meals because they don't have enough fuel to cook. It's a crisis. The staple foods in Africa are beans, cassava, cheap cuts of meat; so it's all long-cooking food. If you boil it on a fire for hours, think how much energy is being consumed? Suddenly, now you bring it to the boil for half an hour, put it in the bag, close it and you're sealing the heat inside so it continues to cook in the bag, saving 7.5 hours of burning. One [benefit] is carbon, so you're saving the fossil fuels that you're burning. You're also saving water. A third less water is used. The biggest killer in the world now is indoor air pollution from smoke in kitchens. This reduces it by 70 percent.

Q: Can you explain your business model?

A: We're not an NGO. To reach the successes and the visions that we wanted to achieve, we knew we had to be a commercial business; but then how do you make something commercial like this when you're appealing to people who live on a dollar a day? Our business model is looking at how we add value to existing corporations. Unilever has put out hugely ambitious goals in terms of their sustainability targets. They're extremely aggressive about achieving it. Their core business is selling food. We did a pilot where we packaged a Wonderbag with their food if you buy three boxes of their Rajah spices [in Shoprite stores in South Africa's KwaZulu-Natal. According to Unilever, Shoprite's sales of Rajah 200g packs tripled in the first three weeks of the promotion.] Unilever realized that by partnering with the Wonderbag they drive their bottom line and they also buy their consumer loyalty. The other thing is they reduce their consumer's carbon footprint by up to 70 percent, and 69 percent of Unilever's carbon footprint is their consumer. You can see the direct link between how Wonderbag is going to help Unilever not just achieve its sustainability goal but also drive its commercial business model.

Q: You launched the Wonderbag in Rwanda and you're currently going through the process of being validated for the United Nations' Clean Development Mechanism. What do you make of the low offset prices in the CDM market?

A: I built my business model around carbon. [UN Certified Emission Reduction credits] were about 27 euros when I started. [Benchmark CERs are now around 2 euros.] I've watched the prices plummet. The failure of Kyoto and the huge recession in Europe had very significant roles to play in this. However it is very evident the world's in a crisis from an environmental standpoint. We are faced with massive problems and it's actually the responsibilities of corporations and leaders in the private sector to take responsibility.

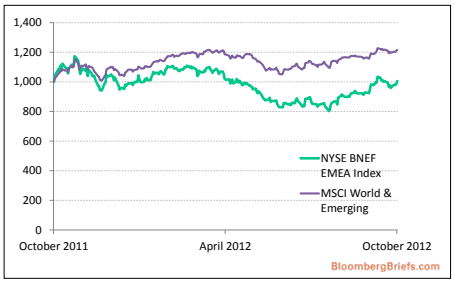
Q: You've sold credits in the voluntary market. What kind of price are you getting?

A: We're selling at 10 euros a ton at a moment. People aren't scared of our price. People are looking beyond pure carbon. People aren't interested in wind farms. People want to see the other benefits of carbon projects, so they're looking beyond commercial carbon projects and saying: Where can we get our biggest bang for buck? I think the turn in the carbon market has allowed more sustainable, robust human-driven projects to come out.

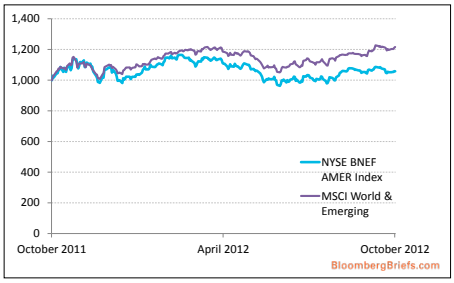
NYSE EURONEXT AND BLOOMBERG NEW ENERGY FINANCE REGIONAL CLEAN ENERGY STOCK INDEXES

The three indexes, covering respectively Europe, Middle East and Africa, the Americas, and Asia and Oceania, currently follow a basket of between 125 and 325 companies with a moderate, or greater, exposure to renewable energy and energy-smart technologies.
The following indexes track shares over the past year. They are indexed to 1,000.

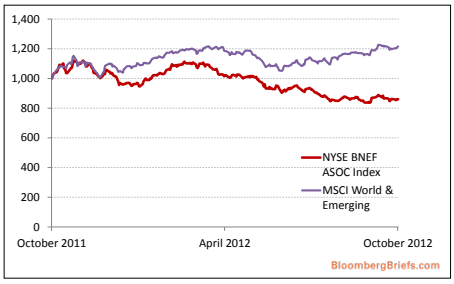
NYSE-BNEF Europe, Middle East and Africa Clean Energy Index



NYSE-BNEF Americas Clean Energy Index



NYSE-BNEF Asia Oceania Clean Energy Index



Source: Bloomberg New Energy Finance

FOCUS

Carbon Absorption Makes Coastal Ecosystems Precious Shore Property, Scientists Say

BY SIOBHAN WAGNER,
BLOOMBERG NEW ENERGY FINANCE

Beach-front homes and land are "fast diminishing," one Western Australian real estate agency recently exclaimed on its website. "Please do your numbers – you will kick yourself if you miss this opportunity in years to come."

The website's sumptuous descriptions and photographs of luxurious waterfront homes conjure thoughts of sunrise coffees, cawing seabirds, salty air, soft breezes and a roaring-ocean lullaby. A four-bedroom piece of this seaside dream could go for $1 million or much more – a tidy sum for any property owner. Still, even at those prices upscale real estate may not be the most valuable shoreline investment.

The world's marshes, mangroves and sea grasses may appear like mere weeds or shrubs on relatively thin coastal fringes, though they are far from insignificant. The United Nations Environment Programme estimates these ecosystems are worth around $25,000 billion per year, noting the often unsung contribution they make to food production and storm and flood protection.

Just like vacant prime property, these vegetated coastal areas are becoming rarer over time. Around the world, vast tidal wetlands have been dyked and drained into arable agriculture land; across Southeast Asia mangroves have been converted to rice fields and shrimp farms; controversy is now brewing over the risks harbor dredging may be posing to underwater meadows of sea grasses, as offshore oil and gas operations boom. At the same time, nature has had an influence. Some wetland areas are being swallowed up by rising sea levels. Scientists estimate that each type of vegetated coastal ecosystem may cover as little as half the global area it encompassed 100 years ago.

This may be creating more than local environmental impacts. The loss of coastal ecosystems potentially leaves a worldwide footprint, as the sediment below these wetlands serves as a hub for carbon sequestration. This category of captured carbon dioxide has been dubbed "blue carbon."

When wetlands are drained and destroyed, their sediment layers oxidize. Once this soil is exposed to air or water it releases carbon dioxide potentially for years.

Up to 1.02 billion metric tons of blue carbon may be released from destroyed coastal habitats annually, according to a study led by researchers from Duke University's Nicholas Institute for Environmental Policy Solutions and Oregon State University. "On the high end of our estimates, emissions are almost as much as the carbon dioxide emissions produced by the world's fifth-largest emitter, Japan," asserted one of the report's authors, **Brian Murray**, director for economic analysis at Duke's Nicholas Institute for Environmental Policy Solutions.

These greenhouse gas emissions are contributing to a range of global-warming effects including droughts, sea level rises and frequency of extreme weather events, according to the report published Sept. 4. It estimated the economic damage from blue carbon emissions ranges from $6 billion to $42 billion per year globally. The report's authors suggest these coastal habitats could be conserved, and climate change alleviated, if a system similar to Reducing Emissions from Deforestation and Forest Degradation, a program that protects trees, were implemented. Such a policy would assign tradable credits to carbon stored in coastal ecosystems, providing financial incentive for continuing to leave them intact.

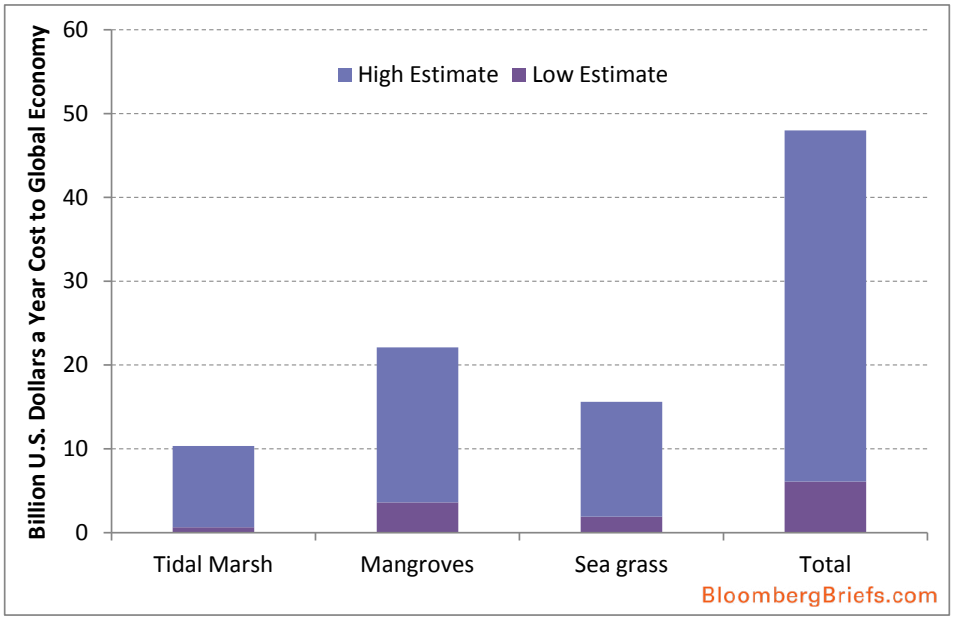
Stephen Crooks, climate change director at **ESA PWA**, an ecosystem consultancy based in San Francisco, said the challenge is there is still uncertainty on how much carbon is reserved in wetlands. "We lack quantification," he said.

Scientific studies indicate mangroves and coastal wetlands may be much more efficient than tropical forests at storing carbon dioxide. Most coastal blue carbon is stored in the soil, not in above-ground plant materials, or biomass, as is the case with forests.

Nick Hardman-Mountford, senior marine researcher at the **Commonwealth Scientific and Industrial Research Organisation** in Australia, said the Amazon rainforest can store about 1 metric ton of carbon per hectare per year. Whereas sea grass beds, he said, can hold an estimated 17 tons of carbon per hectare per year.

Hardman-Mountford said estuaries are likely sequestering more than 100 million tons of carbon a year, and salt marshes are in the range of 80 million tons. "[Coastal ecosystems] might only be less than 1 percent of the total marine surface area, but they do have a very significant contribution to carbon sequestration," he said.

CO2 From Destroyed Wetlands May Cost Economy $42 Bln a Year



Source: Estimating Global Blue Carbon Emissions from Conversion and Degradation of Vegetated Coastal Ecosystems by Pendleton, et al.

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FOCUS...

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Many scientific-based groups are developing requirements for quantifying and crediting the greenhouse gas abatement of wetland conservation projects. One group led by non-profit **Restore America's Estuaries** is developing these methodologies for conservation projects including mangroves and coastal and tidal wetlands for the **Verified Carbon Standard Program**. The VCS is currently the leading standard for the voluntary market. Out of all transactions in 2011, the highest share, or 34 percent, of credits were certified to the VCS, according to Bloomberg New Energy Finance.

Restore America's Estuaries is leading the group in partnership with ESA PWA and **Silvestrum**, a Dutch-based company that helps create carbon assets in land-use projects. The group has received funding from New Orleans-based **Entergy Corp**. and U.S. industrial and defense giant **KBR Inc**.

The VCS released Oct. 4 the first requirements for crediting restoration and conservation activities across wetland ecosystems.

MARKET POTENTIAL

There is a number of wetland projects already testing carbon financing. Entergy, which owns and operates power plants in four Gulf Coast states, has provided funding to **Tierra Resources LLC**, a New Orleans-based environmental consulting firm, to pilot a restoration offset project about 20 miles west of the Big Easy. The Luling Oxidation Pond Wetlands Assimilation project will discharge treated municipal wastewater into an adjacent 950-acre wetland property. The developers hope this will restore the wetlands' function and increase carbon sequestration.

Michael Burns, a spokesman for Entergy, said the company has provided around $500,000 through its shareholder-funded Environmental Initiatives Fund since 2009 to support development of the methodology and the pilot project at the Luling pond.

Entergy, the largest supplier of power in Louisiana, has some interest in conserving coastal wetlands, which provide a defense against storm surges and flooding. It estimated Sept. 18 the cost of restoring its electrical facilities damaged by Hurricane Isaac this year may reach $500 million.

"The damage caused to Louisiana's coastline by hurricanes – from Katrina through the more recent Isaac – made clear the importance of America's wetlands and the role they play in reducing the impact of storms and supporting the region's economic growth," said **Chuck Barlow**, vice president, environmental strategy and policy at Entergy. "The Tierra Resources work now demonstrates that wetland restoration can provide a sink to reduce greenhouse gases."

The methodology for the Luling oxidation pond project was recently approved by the **American Carbon Registry**, a non-profit enterprise of **Winrock International**, following stakeholder consultation and scientific peer review. **Sarah Mack**, chief executive of Tierra Resources, said the goal of the pilot project is to issue carbon credits in approximately 2-3 years. The credits could be purchased by polluters such as power companies and manufacturers looking to offset their emissions.

"It is anticipated that the pilot could generate between 200,000 and 500,000 tons of CO2-equivalent emission reductions over its 40-year life, which depending on the price of carbon, could generate between $5 million and $15 million," she said. "If we are able to include the prevented loss of wetlands, the numbers will be much higher."

The value of the global voluntary marketplace was $576 million in 2011, Bloomberg New Energy Finance said in a report published May 31. The average offset price was about $6.20 a metric ton, up from $6.00 a metric ton in 2010.

RESEARCH PROJECTS

The future of blue carbon finance and policy will depend on science. And there are more and more research projects emerging in the U.S. and the rest of the world on the subject. Commonwealth Scientific and Industrial Research Organisation, and partner organizations, are working through a Marine and Coastal Carbon Biogeochemistry Cluster to track carbon production, distribution and sequestration in Australian coastal environments.

Anissa Lawrence, director of Sydney-based **TierraMar Consulting**, is also leading a project that will create a baseline assessment of carbon in Australia's coastal ecosystems. Lawrence said the work, which is being funded by the **Fisheries Research and Development Corporation**, may eventually lead to methodologies for blue carbon activities under the country's Carbon Farming Initiative. The CFI allows the creation of offsets from agriculture and land-use projects.

Blue carbon is even on the agenda in the Arabian Peninsula. Abu Dhabi, which boasts the largest area of mangroves in the United Arab Emirates, has initiated research into the carbon stocks of its coastal ecosystems through the Abu Dhabi Global Environmental Data Initiative. It hopes to develop a foundation for potential mitigation projects across the United Arab Emirates.

The Indonesian government is currently developing its own demonstration blue carbon projects. **Andreas A. Hutahaean**, principal investigator of the Indonesia Blue Carbon Project, said about 3-7 percent of Indonesia's blue carbon ecosystems are disappearing every year, due to dredging, the degradation of water quality, deforestation and aquaculture activities. "We do know that Indonesia has the largest sea grass and mangrove ecosystems on earth," he said. "So with this large capacity, we believe that blue carbon should be one of the important aspects for [nationally appropriate mitigation actions] in Indonesia."

RARE VALUE

Any offset project or conservation policy will require all potential stakeholders to realize the preciousness of coastal ecosystems. At the moment, it's all relative.

Hardman-Mountford noted at an oceans conference hosted by the **Plymouth Marine Laboratory** last month that a UNEP report valued mangroves at $91,000 per hectare per year. "You compare that to land values; that sounds very high," he told the audience.

"The problem is once you put it into dollars, somebody can always pay more," he added. "So if I look at the average house price in Perth, $500,000 Australian dollars, that adds up to about $10 million per hectare. Is the coastal carbon value too low? Are we actually really capturing the true value of these systems?"

Hardman-Mountford said UNEP currently values all coastal ecosystems at $25,000 billion per year, yet those figures may be an underestimate. "I suggest it could be much more," he said.

Note: This article will also be available to Bloomberg New Energy Finance clients for download on www.bnef.com.

INSIGHT

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Excerpts from Bloomberg New Energy Finance Research

Cross-Border Investment in a Climate Change World

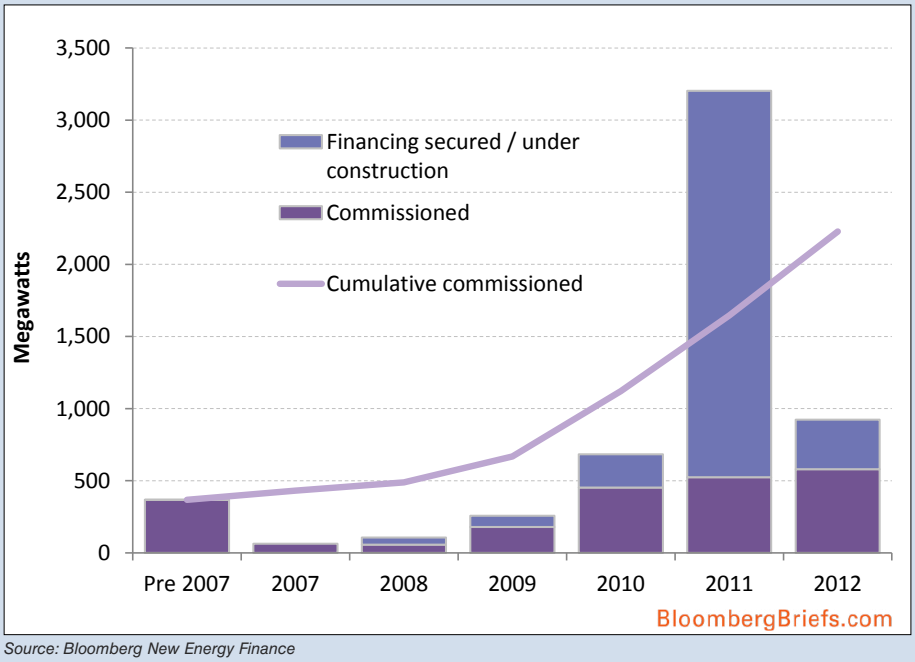
- Of $280 billion in new clean energy investment in 2011, asset finance for renewable power generation projects and biofuel plants accounted for $164 billion. Over two-thirds of asset financings came from domestic sources and the remaining $45.8 billion was deployed across borders.

- Last year saw a shift towards emerging economies with their share of cross-border investment breaking the 25 percent mark for the first time. This shift was driven by a record 71 percent increase in investment between emerging economies (South/South) as well as a more modest 31 percent rise in investment from developed nations (North/South).

- In 2011, some $33 billion flowed North/North, $0.9 billion South/North, $3.9 billion South/South and $8.1 billion North/South. It is this North/South figure that would contribute to the $100 billion that wealthy nations have pledged at international climate talks to deploy annually to help developing economies address the specter of climate change. It only addresses a small portion of the pledge – components of which have not been fully defined.

- As the world's largest economies and largest CO2 emitters, the U.S. and China attracted more clean energy investment in 2011 than any other nations. Meanwhile, Germany has played a critical role in the development of clean power technologies and manufacturing.

H1 2012 Started Slowly for Solar Thermal With 256 MW of Assets Financed Compared to 2,680 MW for Whole of 2011



Source: Bloomberg New Energy Finance

The sharp slowdown was expected following the downturn in Spanish development and lack of financing in the U.S. Plants financed last year in both countries are currently being built.

IN BRIEF

Nuclear Industry Seeks to Quench Its Thirst for Water

Nuclear power remains one of the most water-intensive ways to generate electricity. Nuclear plants, on average, consume as much as 1.5-2.7 cubic meters (400-720 gallons) per megawatt-hour – often more than coal-fired plants and always far more than wind or photovoltaic projects. Rising concerns about water scarcity are now prompting some industry vendors to explore new, less water-intensive opportunities. Several new technologies are either being deployed or under development, with once-through cooling likely to remain a preferred option.

European Biomass Feedstock Demand to Climb

Between 3.6 and 6.8 gigawatt of additional European biomass-to-power capacity could be commissioned in the next four years, according to Bloomberg New Energy Finance's bottom-up forecast. At this scale, it is unlikely that domestic resources will suffice. This may give governments fuel for thought, as they are increasingly keen to control their countries' future biomass feedstock needs. For now, however, the situation remains bleak despite an impressive project pipeline. Some 26 of the 37 projects announced in 2008 are not yet commissioned and remain in various stages of delay.

China Unveils Its Plans for Desalination Technology

China's desalination sector is to some degree where its renewables industry was some five years ago – relatively underdeveloped, critical to the country's future, and poised to receive heavy government support. China is depending on desalination to help close an unexpected supply-demand gap of 21.4 billion cubic meters of water by 2030 on its east coast. The 12th five-year plan for desalination is China's acknowledgement that water scarcity poses a major risk to its economic growth.

SEE THE BLOOMBERG NEW ENERGY FINANCE WEBSITE FOR FURTHER DETAILS WWW.BNEF.COM.