

January 2015



HIGHLIGHTS

Business & Market

India can explore new avenues in Latin America...

Policy Initiatives

Belgian power sector resumes firing...

Finance & Investment

UK Green Investment Bank funds several biomass...

Research & Development

Cusat scientists isolate algae capable of producing...

Climate & Environment Change

Parkash Chander: How to talk climate change...



India

Business & Market

Pine needles: From waste to wealth

At Berinag village, a green organization is making use of unique technology to generate electricity from pine needles without churning out any environmentally hazardous residue. Coniferous pine trees shed these needles - pine leaves, essentially tree waste - in large amounts during summer (from April to June), forming a thick carpet on the forest floor. High in resin-content, the needles can often cause forest fires if the slightest ember, like a half-burnt bidi, is thrown by a villager. The wildfires spread for acres, destroying vast areas of woodland and precious natural resources. Locals are then forced to travel great distances to procure fodder for their cattle and firewood for their hearths.

Avani Bio Energy, a non-governmental organization set up by Rajnish Jain, saw the potential in these pine needles to address the power needs of remote areas. The organization employs local villagers - mainly womenfolk - to collect pine needles in large quantities. The gathered needles are then chopped to increase their density and fed into a gasifier plant.

www.timesofindia.indiatimes.com/city/dehradun/Pine-needles-From-waste-to-wealth/articleshow/45508400.cms

Sindicatum in 180MW clean energy expansion in India

Sindicatum Renewable Energy has signed two JV agreements to acquire 49% stakes in operating co-generation power units totalling 69MW at two of Rana Sugar Limited (RSL) sugar complexes located in Moradabad and Rampur, both in Uttar Pradesh.

In addition, Sindicatum will support the development of further co-generation projects with RSL and its major shareholders at other sugar mills and has acquired the option of adding a further 111MW to its portfolio.

www.eco-business.com/press-releases/sindicatum-in-180mw-clean-energy-expansion-in-india/

Power firms to increase focus on supercritical plants, green capacity

The Indian government is likely to announce new, bigger and more effective climate change targets by January 2015 when US President Barack Obama visits the country. The announcement is likely to include an "aspirational" peaking year for India's greenhouse gas emissions and stricter emission intensity targets.

www.business-standard.com/article/companies/power-firms-to-increase-focus-on-supercritical-plants-green-capacity-114120300930_1.html

Power discom TPDDL finalises deal for 1,000 MU of clean energy

In an effort to encourage clean energy, power discom TPDDL has finalised a deal for 1,000 MU of

RE to be supplied in Delhi in the coming 20 years.

According to Tata Power Delhi Distribution (TPDDL), it has tied up for 6MW of wastes energy power supplying 37 MUs at a levelised tariff of Rs 5.921 per unit for 20 years in the national capital.

www.business-standard.com/article/pti-stories/power-discom-tpddl-finalises-deal-for-1-000-mu-of-clean-energy-114121901366_1.html

India can explore new avenues in Latin America

Pondicherry University Vice-Chancellor Chandra Krishnamoorthy felicitates Riva Ganguly Das, Joint Secretary, Ministry of External Affairs at the University.

India and Latin America stand to mutually benefit through meaningful and purposive cooperation in a range of areas spanning science and technology, space exploration, ocean research, RE and environment, said Riva Ganguly Das, Joint Secretary and Head, Latin American and the Caribbean Division, Ministry of External Affairs, Union Government.

In an invited lecture on "Emerging Latin America and the Caribbean: Opportunities for India" organised by the Pondicherry University UNESCO Madanjeet Singh Institute of South Asia Regional Cooperation, Ms. Das said their integration with the global economy opened up bilateral trade and business opportunities for both countries which were not only major regional economies but also important for being leading members of the emerging regional trading blocs.

www.thehindu.com/news/cities/puducherry/india-can-explore-new-avenues-in-latin-america/article6710670.ece

Global consultancy firms step-up focus on consulting for Indian RE companies

With an increase in activity in sunrise sectors like wind and solar power in India, on the back of a strong push from the Prime Minister Narendra Modi, large consultancy firms like Accenture or Boston Consulting Group are setting sight on consulting for the renewable energy space. Global consulting firms who have had little or no presence in renewable energy consulting in India are ramping up their work after seeing growth in revenues coming in from the sector.

www.timesofindia.indiatimes.com/city/chennai/Global-consultancy-firms-step-up-focus-on-consulting-for-Indian-renewable-energy-companies/articleshow/45555337.cms

Policy Initiatives

India to submit climate plans to United Nations by June

India will submit its plans for tackling climate change to the United Nations by June next year. "India will not make any INDC (intended nationally determined contributions) related announcements in Lima. India will finalise and submit INDC only by June," said Susheel Kumar, the interim head of Indian delegation at the Lima climate conference.

With the US, China, and European Union, each having made announcements — though sometimes only indicative — on their emission reduction plans, there has been speculation that India would make an announcement of its plans for addressing climate change in Lima.

www.economictimes.indiatimes.com/news/politics-and-nation/india-to-submit-climate-plans-to-united-nations-by-june/articleshow/45391632.cms

[National Green Tribunal seeks congestion tax, higher parking fee
www.economictimes.indiatimes.com/articleshow/45381771.cms](http://www.economictimes.indiatimes.com/articleshow/45381771.cms)

Merck commissions climate-neutral plant in India

Merck, a company focused on the pharmaceutical, chemical and life science sectors, has commissioned a climate-neutral co-generation plant at its production site in Goa, India. The project is part of a company-wide climate protection program.

The co-generation unit, which has a power output of 3MW, generates electricity and steam for the pharmaceutical and chemical production operations in Goa. Merck is mainly recycling the shells of cashews and coconuts, two crops that are farmed in the region, to use as biomass fuel. Overall, this will make it possible to reduce carbon dioxide emissions by around 11,500 metric tons, corresponding to around 85% of the site's total CO2 emissions. The biomass plant, which represents an investment of more than €3mn, will ensure that the site has a reliable supply of energy and can operate independently of the public power grid.

www.asianscientist.com/2014/12/pharma/merck-commissions-climate-neutral-plant-india/

World Bank supports program to bring clean cooking to 100mn households

More than three billion people around the world use inefficient cookstoves and traditional biomass fuels for cooking. Over 4.3mn lives a year are lost due to household air pollution from traditional cooking. Furthermore, traditional cooking has a high economic cost for developing nations. Households spend money on poor quality fuel and use a significant amount of productive time in fuel collection. Endeavors to improve this situation have typically faced the hurdle of weak markets and distribution systems for cleaner stoves and fuels.

The World Bank Group has entered into a major partnership with the Global Alliance for Cookstoves, which aims to bring clean cooking to 100mn households worldwide that still use inefficient cookstoves and solid fuels for cooking. The new 5 year Efficient Clean Cooking and Heating Partnership was announced recently at the Cookstoves Future Summit in New York. The partnership will support in-country programs undertaken by both the Global Alliance for Clean Cookstoves and the World Bank Group. It will be managed by the World Bank's Energy Sector Management Assistance Program (ESMAP).

www.justmeans.com/blogs/world-bank-supports-program-to-bring-clean-cooking-to-100-million-households

Hike in excise duty on petrol bodes well for ethanol players

The ethanol blended petrol (EBP) scheme appears to have achieved only marginal success despite being in operation for 10 years.

A major issue revolves around oil marketing companies (OMCs) complaining about lack of ethanol availability, while the sugar industry cries hoarse over the low price offered by OMCs. With OMCs contracting just 22% of their ethanol requirement in the latest tender at Rs 47-48 per litre, a new tender is being planned, but at a lower price in line with the latest drop in petrol prices. In this background, the recent two rounds of excise hikes for petrol bode well for ethanol, which attracts no such duty.

www.articles.economictimes.indiatimes.com/2014-12-09/news/56879490_1_ethanol-availability-ethanol-requirement-petrol-prices

Sugar stocks soar, CCEA fixes price for ethanol procurement

The Cabinet Committee on Economic Affairs (CCEA) fixed the delivered price of Ethanol in the range of Rs 48.50 per litre to Rs 49.50 per litre, depending upon the distance of sugar mill from the depot/installation of the public sector oil marketing companies (OMCs), an official statement said.

www.moneycontrol.com/news/buzzing-stocks/sugar-stocks-soar-ccea-fixes-price-for-ethanol-procurement_1250042.html

Principal Scientific Advisor to PM visits Vaishnodevi bio-gas project

The Principal Scientific Adviser to the PM, Dr. R. Chidambaram visited the mule-dung based bio-gas plant set up by the Shri Mata Vaishno Devi Shrine Board at Banganga in Katra. Dr Chidambaram took stock of this initiative by the board. He had been requested by the Governor, NN Vohra, also the Chairman of the board, to look into various initiatives by the board aimed at harnessing latest technologies for improvement of the yatra and to advise further improvements.

www.tribuneindia.com/news/jammu-kashmir/principal-scientific-adviser-to-pm-visits-biogas-plant-at-katra/15849.html

Kumaon varsity collaborates with European Commission on biomass research

The Kumaon University has joined hands with the European Commission to carry out research in the field of biomass and bio-waste. This collaboration is under the part of the project, SAHYOG (Strengthening Networking on Biomass Research and Biowaste Conversion – Biotechnology for Europe-India Integration), jointly funded by the European Commission and the department of biotechnology under ministry of science and technology.

The project is being coordinated by the Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA) and The Energy and Resources Institute (TERI) of India. The consortium includes seven partners each from Europe and India.

www.timesofindia.indiatimes.com/city/dehradun/Kumaon-varsity-collaborates-with-European-Commission-on-biomass-research/articleshow/45596341.cms

Hybrid CSP-biomass project to be built in India

India's Center for Study of Science Technology and Policy (CSTEP) is leading a project to build a 3MW hybrid solar-biomass plant in Barun, a small village in the state of Bihar, India. "This is the first time that this technology is being used in India in a plant of this scale. Our objective is to make this technology scalable so that it can be used across India," said Anshu Bharadwaj, executive director of CSTEP at the project's inauguration.

The 'Scopebig' project is being developed Under the Indo European Co-operation on Renewable Energy Program by a consortium led by CSTEP along with Thermax Limited, Bihar State Power Generation, the Energy Centre of the Netherlands and French National Centre for Scientific Research. The project involves the development of a 3MW demonstration Solar-Biomass hybrid power plant in Bihar and the related study of economic & employment activities. The project is funded by the Delegation of the European Union to India.

www.csp-world.com/news/20141210/001584/hybrid-csp-biomass-project-be-built-india

NMC plans biogas, biodiesel buses

On the lines of ethanol, Nagpur Municipal Corporation (NMC) has started the process to launch the nation's first biogas and biodiesel city buses. The two new biofuel buses will also be introduced on pilot basis in line with a concept mooted by city MP and union minister of road transport and highways Nitin Gadkari.

In association with Swedish-bus maker Scania Commercial Vehicles India Limited, NMC has successfully launched the pilot project of ethanol-run bus on August 22. It was the initiative of Gadkari to boost sugar industries, farmers, environment and also to reduce dependency on imported fuels to some extent.

www.timesofindia.indiatimes.com/city/nagpur/NMC-plans-biogas-biodiesel-buses/articleshow/45622685.cms

Promote biotechnology in cotton cultivation

Farmers of Warangal have asked the state government to help in making modern biotechnology based advancements in cotton cultivation available to cotton growers in Warangal as well as those in other districts of the state. A large group of farmers took out a rally from Kakatiya University Arts and Science College to the Collectorate and submitted memorandum to the District Administration in support of their demand.

www.thehansindia.com/posts/index/2014-12-23/Promote-biotechnology-in-cotton-cultivation-122470

PM Modi's Swachh Bharat Abhiyan goes organic with Bio-box

Prime Minister Narendra Modi's Swachh Bharat Abhiyan, the country's biggest ever cleanliness drive which has the vision of having a 'Clean India' by the 150th birth anniversary of Mahatma Gandhi, has gone organic.

Green Brick Eco Solutions (GBES) Pvt Ltd, an Indian Institute of Technology (IIT) Delhi start-up, has developed a complete environment friendly waste management system, a machine that processes the wastes/ garbage collected with the help of renewable energy and produces bio-manure and biogas.

The Bio-box, which was launched at the India International Trade Fair 2014 at Pragati Maidan, New Delhi, is a self sustainable organic waste processing system. The system recycles the wastes and produces fresh bio-manure along with ample amount of biogas and all this with renewable energy.

www.iamin.in/hi/new-delhi/news/pm-modi%E2%80%99s-swachh-bharat-abhiyan-goes-organic-bio-box-47918

Finance & Investment

AT Holdings Pte Ltd invests in Indian RE

AT Holdings Pte Ltd, a Singapore based US\$2.5bn investment fund, is expanding its renewable energy portfolio by investing an additional US\$40mn in the Orange Group, headquartered in New Delhi, India.

www.globenewswire.com/news-release/2014/12/02/687996/10110639/en/AT-

[Holdings-Pte-Ltd-Invests-in-Indian-Renewable-Energy.html](#)

[Algae.Tec to raise more funds for pilot plant working capital](#)

Algae.Tec Ltd. announced an agreement with its largest partner, Reliance Industrial Investments, to raise \$AUD2.4mn (approximately \$USD1.94 million) to provide additional working capital for development of an algae pilot plant in Jamnagar, India, featuring Algae.Tec's algae-to-biofuel technology.

Algae.Tec has signed an immediate agreement with Reliance Industrial Investments to raise \$AUD1.4mn through the issuance of 20mn shares at 7 cents per share. In addition Algae.Tec is issuing 14,285,714 options to subscribe for shares at the exercise price of 7 cents per share. According to the agreement, Reliance Industrial Investments must exercise 7,142,857 of these options five months after Dec. 18 and subsequently 10 months after Dec. 18.

www.biodieselmagazine.com/articles/261874/algae-tec-to-raise-more-funds-for-pilot-plant-working-capital

Research & Development

[Cusat scientists isolate algae capable of producing biofuel](#)

The highly polluted backwaters of Cochin estuary could be a rich source of biofuel, as a research team of Cochin University of Science and Technology (Cusat) has managed to isolate a micro-algae capable of producing biodiesel. The algae, prymnesium parvum, which has high content of phosphates and nitrates, is found in the backwaters, off Mattanchery harbour.

The prymnesium parvum yields fuel with optimum properties. "Almost 26% of it is lipids, which can be exploited commercially and can also be grown in mass production systems without contamination from other organisms," said researcher Sanyo Sabu working on the project under Dr Valsamma Joseph, faculty of national centre for aquatic health.

www.timesofindia.indiatimes.com/home/science/Cusat-scientists-isolate-algae-capable-of-producing-biofuel/articleshow/45644966.cms

Climate & Environment Change

[Parkash Chander: How to talk climate change in Paris](#)

The United States and China, the two biggest emitters of GHG, have recently agreed on a timetable to limit their emissions. Under the agreement, the US has agreed to emit 26-28% less carbon in 2025 than it did in 2005 while China will peak its emissions by 2030 and increase the share of non-fossil fuels in its primary energy mix to 20% by 2030.

The US-China agreement came soon after a proposal by the European Union (EU) - the third largest emitter - to reduce its emissions to 40% below 1990 levels by 2030, conditional on whether other countries would make similar commitments at the Paris summit in December 2015.

www.gulftoday.ae/portal/07c3e76a-3d8d-44c6-acb8-9ade96a86d7a.aspx

Louisiana wood pellet plants will cater to Europe's energy needs

Louisiana, an oil-and-gas state, is half covered by timber, making forest products a big business. Companies including Drax Biomass, Biomass Secure Power and German Pellets GmbH plan to churn out wood pellets from new plants to meet Europe's need for electricity and heat provided by renewable fuels. With its trees, waterways and ports, Louisiana can help quench a growing pellet thirst without deforesting the state.

US pellet exports nearly doubled last year to 3.2mn short tons and headed mostly to Europe, according to the US Energy Information Administration. Made from wood shavings, sawdust and chips, these cylindrical nuggets are shipped from the Southern, Southeastern and lower Mid-Atlantic states.

www.huffingtonpost.com/susan-buchanan/louisiana-wood-pellet-plants-will-cater-to-europe-s-energy-needs_b_6245666.html

Tanac to build \$60mn wood pellet mill in Brazil

Tanac S.A. is building a 400,000 tonne per year, \$60mn wood pellet manufacturing plant at its Rio Grande port site in the south of Brazil.

Construction began in October and is scheduled for completion at the beginning of 2016. The first pellets are due for export in mid-2016. Under a long-term agreement, Tanac will supply its wood pellets to Drax Power.

www.bioenergy-news.com/index.php?/Industry-News?item_id=8591

German Pellets signs supply contract of over 5mn tons of pellets

German Pellets signed a further supply contract with a European power-plant operator. The contract has a term of ten years and makes provision for the supply of up to five million tonnes of wood pellets to a power plant in Europe over this period. It is projected that supplies will commence in mid-2016.

www.ihb.de/wood/news/German_Pellets_supply_contract_wood_pellets_39562.html

Vencor international product testing approved: Company's torrefied pellets exceed strict requirements for international client

The Company recently provided samples of its torrefied wood pellets to be tested by one of its international clients. Multiple tests were performed on the Company's product, including ash, sulfur and volatile content analysis as well as fixed carbon and BTU content. Each one of the tests performed exceeded the requirements necessary for approval by the client.

www.marketwired.com/press-release/vencor-international-product-testing-approved-otc-pink-vcor-1976149.htm

Enviva and Hancock Natural Resource Group partner to develop industrial wood pellet projects

Enviva Holdings, LP and John Hancock Life Insurance Company have partnered to develop industrial wood pellet production plants and marine export terminals in the southeastern US, as the company said in the press release received by Lesprom Network.

Through their affiliates, Enviva Development Holdings, LLC ("Enviva") and Hancock Natural Resource Group, Inc. ("HNRG"), the companies have committed to invest up to an aggregate of \$320mn in equity capital in Enviva Wilmington Holdings, LLC (the "Joint Venture").

www.lesprom.com/en/news/Enviva_and_Hancock_Natural_Resource_Group_partner_to_develop_industrial_wood_pellet_projects_65190/

Overseas money boosts biomass industry; Wood pellets from Waycross factory supply fuel in Europe, help ports

Southern forests are drawing uncounted millions of dollars in foreign spending to help utilities overseas meet carbon-emission rules that this country is still debating as tools to limit climate change. What those rules will mean for the environment is in dispute, and will doubtless be contested again based on findings the Intergovernmental Panel on Climate Change released.

www.renewablesbiz.com/article/14/12/overseas-money-boosts-biomass-industry-wood-pellets-waycross-factory-supply-fuel-europe-help-ports

Paul Smith's College, NYSERDA partner on RE

Paul Smith's College is installing a highly sustainable, state-of-the-art wood-pellet boiler system, which will heat its three academic buildings.

This project is one of the first uses in New York State of a high-efficiency and low-emission wood pellet boiler heating system to heat multiple buildings, and one of five sites in the North Country planning to install this technology.

www.biomassmagazine.com/articles/11306/paul-smiths-college-nyserda-partner-on-renewable-energy/

Wood Resources International: U.S. pellet exports up in Q2

Total shipments of wood pellets from North America to Europe plateaued in 2014 after almost four years of continuous increases. During the first two quarters of 2014, exportation from Canada and the US were just over 1.3 mn tons in each of the two quarters. This was down from the all-time-high of almost 1.4mn tons in the 4Q/13, according to the latest issue of the North American Wood Fiber Review.

Pellet volumes shipped out of Canada to Europe have actually fallen by almost 25 percent from the 4Q/13 to the 2Q/14, while volumes leaving the ports in the U.S. South did go up 10% during the same time period.

www.biomassmagazine.com/articles/11317/wood-resources-international-u-s-pellet-exports-up-in-q2

FutureMetrics paper focuses on biomass conversions

In November, FutureMetrics LLC published a white paper on the conversion of old pulverized coal plants to use advanced solid biofuel rather than coal. The paper concludes that converting older coal plants is the lowest cost solution to renewable portfolio standard (RPS) compliance.

Advanced solid biofuel is a dense pellet shaped fuel derived from woody biomass. Just two years ago using pulverized wood pellets in large coal-fired power stations to completely replace coal was unproven, but now there are examples of power plants that are able to reliably generate the same amount of electricity as coal.

www.biomassmagazine.com/articles/11352/futuremetrics-paper-focuses-on-biomass-conversions/

Wood company making investment in Greenwood County

An industrial company is establishing operations in Greenwood County to convert forest matter into wood pellets. Portucel, S.A. is investing \$110mn to open a manufacturing facility in Greenwood. The investment is expected to create 70 new jobs.

www.clintonchronicle.com/articles/2014/12/15/latest_news/doc548f4ab1a00ab106477005.txt

Washakie Renewable Energy expands biodiesel production capacity

Plymouth, Utah-based Washakie Renewable Energy is doubling its biodiesel production capacity from 20 MMgy to 40 MMgy, plant manager Brian Starr told Biodiesel Magazine. The expansion project started in late November and is scheduled for completion in January.

www.biodieselmagazine.com/articles/253631/washakie-renewable-energy-expands-biodiesel-production-capacity

Novozymes' Eversa enzymatic biodiesel solution ready for market

After working with a handful of producers over the past several years to prove the technical and economic viability of liquid enzymatic biodiesel processing, Novozymes is making its Eversa enzymatic processing solution commercially available to the biodiesel industry.

www.biodieselmagazine.com/articles/252323/novozymes-everesa-enzymatic-biodiesel-solution-ready-for-market

Hawaiian Electric, Pacific Biodiesel agree on new contract

Hawaiian Electric and Pacific Biodiesel Technologies have signed a contract for the Maui-based biofuel company to supply biodiesel processed from waste cooking oil and other local feedstocks, primarily for use at the 110MW Campbell Industrial Park generation facility with the capability for use at other Oahu power plants as needed.

The two-year contract for a minimum of 2 MMgy and up to 3 MMgy will go into effect in November 2015, subject to review and approval by the Hawaii Public Utilities Commission.

www.biodieselmagazine.com/articles/252950/hawaiian-electric-pacific-biodiesel-agree-on-new-contract

2nd generation biofuels market is expected to reach \$23.9bn, global, by 2020 - Allied Market Research

According to a new report by Allied Market Research titled, "Global Second Generation Biofuels - Size, Industry Analysis, Trends, Opportunities, Growth and Forecast, 2013 - 2020", the global second generation biofuels (Advanced Biofuels) market would reach \$23.9 billion by 2020, registering a CAGR of 49.4% during 2014 - 2020. Currently, Biodiesel garners the largest market share; however, the latest and the most commercially viable Cellulosic ethanol would surpass Biodiesel and eventually lead the market by 2020. North America generated largest revenue, as it

has over 50% of the globally installed capacity base.

www.prnewswire.com/news-releases/second-generation-biofuels-market-is-expected-to-reach-239-billion-global-by-2020---allied-market-research-286225291.html

Indiana ethanol plant resumes operations

www.ethanolproducer.com/articles/11745/indiana-ethanol-plant-resumes-operations

Iogen announces startup of Brazilian cellulosic ethanol plant

Ottawa-based Iogen Corp. announced its first commercial-scale cellulosic ethanol plant is producing ethanol in Brazil. The first 200,000 liters (53,000 gallons) has been distributed by Brazilian ethanol producer, Raízen, to its network of gas stations, Ziyad Rahme, senior vice president and general manager of Iogen Energy, told Ethanol Producer Magazine.

www.ethanolproducer.com/articles/11752/iogen-announces-startup-of-brazilian-cellulosic-ethanol-plant

REG, Neste settle patent lawsuits, enter into license agreement

www.biodieselmagazine.com/articles/261894/reg-neste-settle-patent-lawsuits-enter-into-license-agreement

REG completes upgrades at Newton, Iowa, biodiesel plant

On Dec. 15, Renewable Energy Group Inc. celebrated the completion of upgrades to its 30 MMgy nameplate biorefinery in Newton, Iowa, which allows the plant to produce an even higher purity biomass-based diesel from a wider variety of raw materials.

REG broke ground on the \$13.2mn project in February and completed it in November, four months ahead of schedule and on budget. In addition to the production process upgrades, a further \$2.6mn was invested to expand storage capacity by 2mn gallons and enhance logistics, for a total investment of \$15.8mn.

www.biodieselmagazine.com/articles/260402/reg-completes-upgrades-at-newton-iowa-biodiesel-plant

Amyris renewable jet fuel receives regulatory approval in Brazil

Amyris Inc. welcomed the approval of its renewable jet fuel by Brazil's fuels regulator, ANP, clearing the way for the commercialization in Brazil of the Amyris renewable jet fuel in blends of up to 10%.

www.biodieselmagazine.com/articles/260421/amyris-renewable-jet-fuel-receives-regulatory-approval-in-brazil

New green fuel plant for Drax Power Station opens in Hull

A new £16mn biomass fuel terminal has officially opened in Hull.

Associated British Ports (ABP) has invested £100mn in adapting its port facilities to meet the growing need of the UK's renewable energy industry. The terminal will transport a million tonnes of wood pellets from the King George Dock in Hull to the Drax power plant in North Yorkshire every year. It has created 40 full-time jobs and was built in partnership with Hull engineering firm Spencer Group.

www.hulldailymail.co.uk/New-green-fuel-plant-Drax-Power-Station-opens/story-25113251-detail/story.html

New biomass facility aiding Bridgestone's carbon neutrality goals in Costa Rica

In 2007, the Central American nation of Costa Rica set itself the goal of becoming the world's first carbon neutral country, a feat it aimed to achieve by 2021. Bridgestone de Costa Rica (BSCR) has supported this ambition and set itself the goal of achieving C-Neutral certification by the Costa Rican government. It has worked towards this via a number of projects, including the installation of LED lights and solar lamps, switching to greener chemical products and implementing a carpooling programme. Last year it introduced nitrogen vulcanisation, replacing less energy-efficient hot water. As a result of these and other efforts, CO2 emissions at BSCR sank by 923 tons year-on-year in 2013, a 4.14% reduction.

www.tyrepress.com/2014/12/new-biomass-facility-aiding-bridgestones-carbon-neutrality-goals-in-costa-rica/

Maine Voices: Energy coming out of the woodwork

One of our most important state industries just got a boost from the Environmental Protection Agency. Maine is getting recognition for wood chips that make up the state's second largest source of renewable energy.

www.pressherald.com/2014/12/07/maine-voices-energy-coming-out-of-the-woodwork/

Trestle Energy gets low carbon intensity rating for ethanol in BC

www.ethanolproducer.com/articles/11696/trestle-energy-gets-low-carbon-intensity-rating-for-ethanol-in-bc

\$50mn southern Ontario biodiesel plant goes into receivership

www.theobserver.ca/2014/12/11/50m-southern-ontario-biodiesel-plant-goes-into-receivership

REG to acquire majority ownership of Germany's Petrotec AG

www.biodieselmagazine.com/articles/257840/reg-to-acquire-majority-ownership-of-germanys-petrotec-ag

RusForest to sell Arkhangelsk assets

RusForest, a Swedish forestry company with operations in Russia sold its Arkhangelsk assets in northwest Russia for approximately \$31mn, including related debt.

www.bioenergy-news.com/index.php?/Industry-News?item_id=8623

Innovation and private sector financing are transforming agribusiness in Africa

Organic farming and ethanol from sugar cane are just some of the innovations that are helping to transform the agricultural sector across Africa. However, ensuring food security for the continent's one billion people remains the first priority.

New global markets for everything from bananas and cocoa to cut flowers and organic vegetables, green energy generated by locally-grown biomass and a new emphasis on sustainable, yet profitable, farming techniques are all helping to transform Africa's agribusiness industry.

www.theworldfolio.com/news/gaiv-tata,world-bank-director-for-financial-private-sector-development-africa-uganda-ghana/3459/

Texas Co-op adds biomass capacity

Pine trees are now a power source in East Texas, and a co-op biomass plant is using the fuel to produce enough electricity to meet the needs of 35,000 homes. Officials from East Texas Electric Cooperative say the new Woodville Renewable Power Project is generating about 50 megawatts of electricity from timber waste produced by local logging operations.

www.ect.coop/power-supply/renewable-energy/texas-co-op-adds-biomass-capacity/76017

Korrie biomass boost

An Inverness firm has installed £1.5mn worth of its biomass heating system "Kabins" this year – and is projecting a 50% increase in such sales in 2015. Korrie Mechanical & Plumbing has also picked up two new contracts worth £1.4mn to finish the year on a high note.

Managing director Donnie Fraser said: "We launched Korrie Renewables and opened our own Korrie Energy Park in Inverness, where we manufacture biomass systems, installing them within a portable natural wood cabin."

www.pressandjournal.co.uk/fp/business/north-of-scotland/425060/korrie-biomass-boost/

SBP accepts biomass producers as applicants for certification

Sustainable Biomass Partnership recently announced that five certification bodies have been accepted as applicants and are now able to progress towards achieving SBP-approved status. The applicant certification bodies are: BM Trada, Bureau Veritas Latvia, Control Union, NEPCon and National Science Foundation.

The SBP Framework of standards and processes enables producers of woody biomass to demonstrate that they source their raw material responsibly and that it complies with the legal, regulatory and sustainability requirements applicable to European power generators. It also facilitates the carriage of energy and carbon data along the supply chain to the end-user. Under the SBP Framework the biomass producer, typically a pellet mill, is certified by a SBP-approved certification body and is responsible for ensuring that its feedstock meets the SBP standards.

www.biomassmagazine.com/articles/11377/sbp-accepts-biomass-producers-as-applicants-for-certification

Gasoline prices influence ethanol market direction

Ethanol supplies are becoming much more manageable at the end of the year. This has lessened concern about gaining access to needed gallons and sparked aggressive price pressure in all ethanol markets.

www.ethanolproducer.com/articles/11787/gasoline-prices-influence-ethanol-market-direction

Pacific Ethanol, Aventine announce merger

California-based Pacific Ethanol Inc. and Aventine Renewable Energy Holdings Inc., a Midwest-based producer of ethanol and related coproducts, announced they have entered into a definitive merger agreement under which Pacific Ethanol will acquire all of Aventine's outstanding shares in a stock-for-stock merger transaction.

www.ethanolproducer.com/articles/11786/pacific-ethanol-aventine-announce-merger

Efficient producers approved for expanded ethanol production

Nine ethanol producers received approval under the US EPA's efficient producer petition process. It allows those producers to generate renewable identification numbers (RINs) above the registered volume that was grandfathered in under the renewable fuel standard (RFS).

www.ethanolproducer.com/articles/11782/efficient-producers-approved-for-expanded-ethanol-production

Darling to receive \$65mn from reinstated tax credit

Darling Ingredients Inc. announced that it expects to receive about \$65mn from the reinstated \$1 per gallon federal blenders tax credits for renewable diesel and biodiesel signed into law by President Obama Dec. 19. The tax credit was made retroactive back to Jan. 1, 2014, through the end of the year.

www.biodieselmagazine.com/articles/268065/darling-to-receive-65-million-from-reinstated-tax-credit

Immobilized Enzyme Technology enters commercial stage

TransBiodiesel supplies its flagship product to the biodiesel production industry under the brand name TransZyme A, providing the best use cost when dealing with high-FFA feedstock, delivering greater yields and efficiencies to biodiesel producers.

www.biodieselmagazine.com/articles/265496/immobilized-enzyme-technology-enters-commercial-stage

Clean cookstoves provide health, environmental, and socioeconomic benefits, So why aren't they being adopted?

A new generation of "clean cookstoves," has the potential to reduce harmful emissions, increase efficiency, and improve health and livelihoods, especially for women (after high blood pressure, household air pollution is the leading global disease burden for women).

Yet clean cookstoves are not one-size-fits all. They must be tailored to local culture to be adopted and require long-term investment for sustainable use.

www.newsecuritybeat.org/2014/12/clean-cookstoves-provide-health-environmental-socioeconomic-benefits-arent-adopted/

DelAgua water filters and clean cookstoves benefit 500,000 in Rwanda

British company DelAgua has been bringing fuel-efficient cookstoves and water filters to people in the poorest part of Rwanda since October, and it says that it has now donated these basic life-saving solutions to nearly 500,000 people there.

www.cleantechnica.com/2015/01/01/delagua-water-filters-clean-cookstoves-benefit-500000-rwanda/

REG closes acquisition of majority stake in Germany's Petrotec

www.biodieselmagazine.com/articles/268053/reg-closes-acquisition-of-majority-stake-in-germanys-petrotec

[Belgian power sector resumes firing of wood pellets](#)

An updated report filed with the USDA Foreign Agricultural Service Global Information Network indicates the Belgian power sector has resumed firing of biomass.

The report explains that the Flemish power sector temporarily stopped firing wood pellets from March to July 2014 because the Belgian wood sector argued that pellet production cannibalized its raw material. The power sector began to generate power using wood pellets gain in August due to a new Belgian Decree that requires the wood sector to prove the threat to their inputs prior to limiting the use of pellets.

During the period from March-July, the Belgian government did not grant Green Certificates for pellets that were produced from a resource that could be used as a raw material by another domestic industry. Prior to March, the Belgian wood industry federation only projected to the production of domestic pellets, which did not impact the power sector because the vast majority were imported from North America. In March, the Flemish Regulator of the Electric and Gas Market no longer allowed the federation to make a distinction based on the origin of wood pellets alone. As a result, certificates for burning wood pellets were not granted, and were revoked retroactively back to January.

www.biomassmagazine.com/articles/11381/belgian-power-sector-resumes-firing-of-wood-pellets

[Beyond Electrification: Why fuels matter for energy access](#)

Though growing interest in energy access issues in developing countries has led to more open discussions and more funding opportunities, much of it is focused on electrification needs, not clean cooking and heating fuels. Despite the lop-sided attention, the statistics on access to clean cooking and heating fuels in the developing world are just as (if not more) staggering as the electrification challenge, and ensuring access to modern fuels demands at least as much urgency.

www.theenergycollective.com/angi-acocella/2169401/beyond-electrification-why-fuels-matter-energy-access

[Industry commitment to sustainable biomass energy](#)

The Climate, Energy and Building Ministry has announced that the energy sector has voluntarily agreed on an industry commitment to sustainable biomass energy production. The agreement includes requirements on sustainable forestry and the emission of CO₂ in the supply chain of biomass material for energy generation.

The agreement, signed by the energy companies Dansk Energi and Dansk Fjernvarme, comes in response to a call from Rasmus Helveg Petersen, the climate energy and building minister, to use only sustainably produced biomass material for energy production.

www.cphpost.dk/news/industry-commitment-to-sustainable-biomass-energy.11901.html

[USDA improves forest health by harvesting biomass for energy](#)

Agriculture Secretary Tom Vilsack announced that more than 200,000 tons of biomass were removed from federal lands through the Biomass Crop Assistance Program. BCAP, reauthorized by the 2014 Farm Bill, provided incentives for the removal of dead or diseased trees from National

Forests and Bureau of Land Management lands for renewable energy, while reducing the risk of forest fire. This summer, 19 energy facilities in 10 states participated in the program.

"This initiative helps to retrieve forest residues that are a fire risk, but otherwise are costly to remove," said Vilsack. "In just three months, working with private partners across the country, the program helped to reduced fire, disease and insect threats while providing more biomass feedstock for advanced energy facilities."

www.ethanolproducer.com/articles/11750/usda-improves-forest-health-by-harvesting-biomass-for-energy

Rebates offered for home owners with low energy bills: The rebates can range anywhere from \$750 to \$12,500

The Massachusetts Clean Energy Center and Department of Energy Resources announced \$2.62mn in rebates available for home owners looking to lower their energy bills by installing cleaner and more energy efficient heating technologies.

The rebates are available for wood pellet heating systems which run on wood pellets made from materials like compacted sawdust.

www.wwlp.com/2014/12/04/rebates-offered-for-home-owners-with-low-energy-bills/

House votes to extend biodiesel tax credit through 2014

In a vote of 378 to 46, the US House of Representatives voted to pass a short-term tax extenders package (HR 5771) Dec. 3 that would reinstate the biodiesel tax incentive retroactive to its expiration on Jan. 1, 2014, through the end of this year only. The National Biodiesel Board is urging lawmakers to act quickly on a longer-term tax deal that would provide more certainty for growth and investment in the US biodiesel industry.

www.biodieselmagazine.com/articles/254227/house-votes-to-extend-biodiesel-tax-credit-through-2014

UFOP: Conservation through legally binding conventions, not ILUC

The Union for the Promotion of Oil and Protein Plants (Union zur Förderung von Oel- und Proteinpflanzen, or UFOP) demands the continuation of a sustainable European biofuel policy after 2020. The union criticizes that, in its draft for a national climate conservation action program 2020, the German federal department of the environment doesn't take bioenergy or biofuels into account. Measures adopted in the framework of this program ultimately determine the climate conservation strategy beyond 2020, UFOP emphasized.

www.biodieselmagazine.com/articles/252869/ufop-conservation-through-legally-binding-conventions-not-iluc

Report on rail car retrofits pegs \$5.3bn cost to ethanol in 2019

A new report prepared by economic research firm The Brattle Group showed that the proposed Department of Transportation rule on rail tank cars could cost the economy as much as \$60bn and projected costs for the ethanol industry will increase by nearly \$5.3bn in the industry's peak impact year of 2019.

www.ethanolproducer.com/articles/11722/report-on-rail-car-retrofits-pegs-5-3-b-cost-to-ethanol-in-2019

EIA: New ethanol production records set, 2015 forecast increased

The US Energy Information Administration has released the December issue of its Short-Term Energy Outlook, reporting new records for average weekly and monthly ethanol production. The EIA also increased its 2015 production forecast.

www.ethanolproducer.com/articles/11729/eia-new-ethanol-production-records-set-2015-forecast-increased

EU must keep benefits of sustainable biofuels in sight

These are still uncertain times for the European ethanol industry. Discussions in the EU are well underway to revise the current EU biofuels policy, which expires in 2020, and the EU has not indicated what type of biofuel rules, if any, will exist after 2020. This policy uncertainty is the biggest challenge facing European ethanol producers.

www.ethanolproducer.com/articles/11714/eu-must-keep-benefits-of-sustainable-biofuels-in-sight

Senate passes tax extenders; biodiesel credit to be reinstated

In a 76 to 16 vote, the U.S. Senate on Dec. 16 passed the tax extenders package that the House passed earlier this month, which includes the \$1 per gallon biodiesel and renewable diesel tax credits. The tax credits will be stated retroactively back to Jan. 1, 2014, and is good only through Dec. 31 of this year. President Obama is expected to sign the legislation within days.

www.biodieselmagazine.com/articles/260748/senate-passes-tax-extend-biodiesel-credit-to-be-reinstated

Finance & Investment

UK Green Investment Bank funds several biomass projects

UK Green Investment Bank invested in a new waste treatment plant in North Yorkshire that will generate 203GWh of electricity per year.

The investment has been done in a waste wood renewable energy facility, an energy-from-waste treatment plant, the installation of biomass heating on a poultry farm and a biomass boiler installation at a whiskey distillery. These recent investments join many others as GIB passes its £5bn milestone.

GIB has invested into the UK's green-energy sector for the past two years, and as of Oct. 30 has funded 37 projects producing 13.1TWh of renewable energy, equivalent to energy consumption in 3.1mn UK homes, and preventing 1.5mn tons of waste from going to landfill sites each year.

www.biomassmagazine.com/articles/11375/uk-green-investment-bank-funds-several-recent-biomass-projects

Cleantech start-up Diacarbon gets \$2mn EDC financing

Vancouver-based Diacarbon Energy Inc. has received \$2mn in financing from Export Development Canada.

The money will help Diacarbon develop a thermal biomass refinery to convert wood waste into low carbon bio-fuels ready for distribution. The plant is planned for the interior of British Columbia.

Diacarbon is a startup cleantech company producing wood pellets and developing torrefied biocoal, both of which can be used as a replacement for fossil coal. Since 2009, Diacarbon has focused its efforts on perfecting its biocoal product made from natural wood waste and now aims to demonstrate commercial scale production and distribution.

www.canadianmanufacturing.com/manufacturing/cleantech-start-diacarbon-gets-2m-edc-financing-143131/

USDA announces support for producers of advanced biofuel

Agriculture Secretary Tom Vilsack announced that USDA is making \$5.6mn in grants to 220 producers across the nation to support the production of advanced biofuels, and is awarding more than \$4mn in additional grants that will advance the bioeconomy and reduce the nation's dependence on foreign oil.

www.csrees.usda.gov/newsroom/news/2014news/12021_advanced_biofuels.html

UK opens competition to fund demonstration-scale biofuel plants

The UK Department for Transport has announced plans to award GBP £25mn (\$39.37 mn) to support the development of up to three advanced biofuel demonstration plants. The funding, which will be made available over a three-year period, will be awarded through a two-stage competition.

www.ethanolproducer.com/articles/11748/u-k-opens-competition-to-fund-demonstration-scale-biofuel-plants

Finland provides money to build cellulosic ethanol plant

The Government of Finland announced that it granted \$36.8mn to help build a cellulosic ethanol plant. A separate project to produce biogasoline, biodiesel and smaller amounts of other renewable products was granted about €3.3mn. The cellulosic ethanol plant is expected to use about 72,000 tons of straw to produce more than 90 MMlly (23.7 MMgy).

www.ethanolproducer.com/articles/11756/updated-finland-provides-money-to-build-cellulosic-ethanol-plant

Hungarian ethanol plant to expand capacity above 100 MMgy

Nearly three years after construction was completed at a corn-ethanol plant in Dunafoldvar, Hungary, Pannonia Ethanol has signed a loan deal so it can expand its production capacity.

Pannonia Ethanol, which is a subsidiary of Ethanol Europe Renewables Ltd., originally started out with a capacity of 240 MMlly (63.4 MMgy) and currently produces 280 MMlly. Now, with a \$40.9mn loan package from an investment fund managed by Montreal's Cordiant Capital and with the Hungarian Export Import Bank, the ethanol plant will expand to 450 MMlly, or 119 MMgy. With the expansion complete, total investment in the facility will reach \$248.48mn.

www.ethanolproducer.com/articles/11757/hungarian-ethanol-plant-to-expand-capacity-above-100-mmgy

UNICA: Brazilian ethanol production up, exports down

www.ethanolproducer.com/articles/11760/unica-brazilian-ethanol-production-up-exports-down

Sefa to help scale-up innovative clean cooking business in Nigeria

The Sustainable Energy Fund for Africa (SEFA) approved a US \$580,000 preparation grant for the expansion of Green Energy & Biofuels (GEB) Bio-refinery project in Nigeria. The project is a pilot of Small & Medium Entrepreneurship Fundamentals (SMEFunds), a social enterprise based in Lagos, and the first bio-energy cooking fuel production facility and distribution network in Nigeria.

Specifically, the SEFA grant will finance technical studies, business advisory services and a full environmental and social impact assessment in support of the scaling-up of SMEFunds/GEB operations, particularly the waste-to-ethanol cooking fuel production and distribution in Nigeria, to fully harness economies of scale. The expansion entails growing their biogel production capacity from 1,000 to 30,000 litres/day and ramping up the cookstove manufacturing supply chain four-fold over the next three years.

www.allafrica.com/stories/201412101258.html

SUNY College wins DoE grant to support feedstock logistics research

The US Department of Energy has awarded up to \$3mn to the SUNY College of Environmental Science and Forestry to develop and demonstrate ways to reduce the cost of delivering woody bioenergy feedstocks to biorefineries.

Specifically, the grant will be used to lower the delivered cost of short-rotation woody crops; rapidly, accurately, and reliably assess feedstock quality; and improve harvest and preprocessing operations to produce feedstocks that meet key biorefinery partner specifications. ESF will work with partners including Case New Holland Industrial, Greenwood Resources, University of West Virginia, Applied Biorefinery Sciences, Idaho National Lab and others to complete the project.

www.ethanolproducer.com/articles/11753/suny-wins-doe-grant-to-support-feedstock-logistics-research

Genera announces investment from WindSail Capital Group

Leading biomass supply company, Genera Energy Inc., has received a strategic financing commitment from WindSail Capital Group, a Boston-based investment firm that provides growth financing to companies advancing energy innovation and sustainability.

WindSail Capital's investment will provide Genera with the resources to continue its global expansion by helping scale its energy crop production and supply chain operations, further expand the portfolio of biomass feedstocks and geographies it covers, and expand the working capital of the company as a whole.

www.ethanolproducer.com/articles/11739/genera-announces-investment-from-windsail-capital-group

Research & Development

Simultaneous saccharification and fermentation of steam-exploded corn stover at high glucan loading and high temperature

www.7thspace.com/headlines/500240/simultaneous_saccharification_and_fermentation_of_steam_exploded_corn_stover_at_high_glucan_loading_and_high_temperature.html

JM Davy earns prestigious award for reactive distillation process

The team at Johnson Matthey Davy Technologies was recognized at the prestigious annual Institution of Chemical Engineers (IChemE) Awards by winning the IChemE Sustainable Technology Award for its development of a reactive distillation process for biodiesel production. The technology is geared toward converting low-quality feedstocks to market-ready biodiesel efficiently and economically.

www.biodieselmagazine.com/articles/251809/jm-davy-earns-prestigious-award-for-reactive-distillation-process

Bioenergy knowledge discovery framework recognized at national conference

The paper and poster presentation "Bioenergy KDF: Enabling Spatiotemporal Data Synthesis and Research Collaboration" was awarded second place for best paper at the ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems, held November 4–7 in Dallas, Texas.

The Bioenergy KDF is an online collaboration and geospatial analysis tool managed by the Bioenergy Technologies Office and supported by Oak Ridge National Laboratory.

www.einnews.com/pr_news/240316715/bioenergy-knowledge-discovery-framework-recognized-at-national-conference

Boeing runs 15% green diesel in 787 flight

Boeing has completed the world's first flight using "green diesel," a sustainable biofuel that is widely available and used in ground transportation. The company powered its ecoDemonstrator 787 flight test airplane on Dec. 2 with a blend of 15% green diesel and 85 percent petroleum jet fuel in the left engine.

www.biodieselmagazine.com/articles/257721/boeing-runs-15-percent-green-diesel-in-787-flight

Viesel develops continuous enzymatic biodiesel process

In collaboration with Tactical Fabrication of Dublin, Georgia, and Novozymes of Denmark, a novel biodiesel production technology developed by Viesel Skunk Works LLC will soon be offered commercially. The innovative system features a continuous flow enzymatic reaction process that also eliminates sulfur from biodiesel when low-grade feedstocks such as brown grease are used.

www.biodieselmagazine.com/articles/257823/viesel-develops-continuous-enzymatic-biodiesel-process

Universities shed light on latest bioenergy developments

A group of university engineers and scientists is spreading the word about work being done in bioenergy and its potential to reduce climate impacts linked to fossil fuels, increase the value of agricultural products, revitalize rural communities, bolster national security and curb U.S. reliance on imports.

www.ethanolproducer.com/articles/11484/universities-shed-light-on-latest-bioenergy-developments

Renmatix acquires Sweden-based REAC Fuel's intellectual property

Renmatix Inc., the architect of affordable cellulosic sugars for the global renewable chemicals markets, recently announced it has acquired the intellectual property rights and know-how of REAC Fuel. Based in Sweden, REAC has developed intellectual property that complements Renmatix's significant expertise and existing portfolio of supercritical technology patents and applications. The acquisition expands Renmatix's value proposition for licensing their Plantrose Process to produce cost-competitive cellulosic sugars.

www.ethanolproducer.com/articles/11746/renmatix-acquires-sweden-based-react-fuels-intellectual-property