

JANUARY 2014



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## Policy Initiatives

### India

#### Indian Punjab to help Pakistan Punjab set up biomass energy plants

Aiming to strengthen Punjab-Punjab relations on social and bilateral front, Punjab deputy chief minister Sukhbir Singh Badal has promised to support Pakistan Punjab in setting up biomass plants.

[www.articles.timesofindia.indiatimes.com/2013-12-16/india/45254844\\_1\\_indian-punjab-biomass-power-surplus-state](http://www.articles.timesofindia.indiatimes.com/2013-12-16/india/45254844_1_indian-punjab-biomass-power-surplus-state)

#### Integrated waste management strategy for Chennai nears completion

According to sources in the Corporation, the key aspects of the strategy will include focusing on reduction of waste generated in the city, mainstreaming of informal groups associated with recycling and bringing down the quantity of waste in landfills. The civic body now generates over 4,500 tonnes of municipal solid waste on a daily basis. Officials from Tamil Nadu Urban Infrastructure Financial Services Ltd will help the Corporation zero in on the right technology based on the strategy.

[www.thehindu.com/news/cities/chennai/integrated-waste-management-strategy-for-chennai-nears-completion/article5471067.ece](http://www.thehindu.com/news/cities/chennai/integrated-waste-management-strategy-for-chennai-nears-completion/article5471067.ece)

#### Gujarat plans to launch WtE pilot project in 50 cities

The plant will generate power, fertilizer and reusable water, which will be provided to rural areas for usage in agriculture.

[www.niticentral.com/2013/12/20/gujarat-model-now-solid-waste-management-for-power-generation-in-50-cities-170777.html](http://www.niticentral.com/2013/12/20/gujarat-model-now-solid-waste-management-for-power-generation-in-50-cities-170777.html)

#### SWM earns Pune invite to UN coalition

The Pune Municipal Corporation (PMC) has been invited to be a member of the United Nations Environment Programme's (UNEP) Climate and Clean Air Coalition (CCAC). If the membership is granted, the civic body could have easier access to funds from international agencies like the World Bank and the Asian Development Bank for projects that mitigate environmental degradation.

[www.timesofindia.indiatimes.com/home/environment/the-good-earth/Solid-waste-management-earns-Pune-invite-to-UN-coalition/articleshow/26813563.cms](http://www.timesofindia.indiatimes.com/home/environment/the-good-earth/Solid-waste-management-earns-Pune-invite-to-UN-coalition/articleshow/26813563.cms)

#### Delhi Master plan should make waste disposal area mandatory in each zone: Sunita Narain, Director-General of the Centre for Science and Environment

[www.thehindu.com/news/cities/Delhi/delhi-master-plan-should-make-waste-disposal-](http://www.thehindu.com/news/cities/Delhi/delhi-master-plan-should-make-waste-disposal-)

[area-mandatory-in-each-zone/article5496618.ece](#)

## SWM scheme launched in rural areas

To boost solid and liquid waste management (SLWM) in rural areas, State Government has launched SWM scheme in as many as 14 village panchayats in Coimbatore. To support the scheme, Government has allotted Rs. 100 crore for the implementation.

[www.articles.timesofindia.indiatimes.com/2013-12-23/coimbatore/45509712\\_1\\_waste-management-panchayats-scheme](http://www.articles.timesofindia.indiatimes.com/2013-12-23/coimbatore/45509712_1_waste-management-panchayats-scheme)

## Indore needs fresh initiatives on waste, water management: IAS officers

During the visit of six joint secretary level officers, they felt that primary collection of solid waste, sewage treatment, full operationalisation of drinking water project at Mandaleshwar for Indore city and housing and basic amenities for urban poor are the points which need focused attention.

[www.dnaindia.com/india/report-indore-needs-fresh-initiatives-on-waste-water-management-say-ias-officers-1939591](http://www.dnaindia.com/india/report-indore-needs-fresh-initiatives-on-waste-water-management-say-ias-officers-1939591)

### North America

## Bills to extend tax credits benefiting biofuels introduced

On Dec. 12, Rep. Scott Peters, D-Calif., introduced two bills that would benefit the biofuels industry. One, H.R., 3758, aims to extend the 2<sup>nd</sup> generation biofuel producer credit and the special allowance for 2<sup>nd</sup> generation biofuel plant property. The other, H.R. 3757, which would extend and increase the tax credit for research and development.

H.R. 3757, also known as the "Second Generation Biofuel Extension Act of 2013," would extend the 2<sup>nd</sup> generation biofuel tax credit for one year, extending the expiration date. It would also extend the special allowance for 2<sup>nd</sup> generation biofuel plant property for one year, though Jan. 1, 2015.

According to information released, H.R.3758, or the "Igniting American Research Act," would make the tax credit for research and development permanent. It is currently scheduled to expire at the end of the year. More specifically, the bill would extend the research credit through 2014 and make the Alternative Simplified Credit permanent and increase it from 14% to 20%.

[www.biomassmagazine.com/articles/9803/bills-to-extend-tax-credits-benefiting-biofuels-introduced](http://www.biomassmagazine.com/articles/9803/bills-to-extend-tax-credits-benefiting-biofuels-introduced)

### Europe

## UK calls for change in EU biofuels policy

Britain has proposed a way to lower the European Union's 2020 target for RE by counting the contribution from biofuels twice, avoiding the need for billions of Euros in investment.

According to the document, Britain sets out the financial benefits of an accounting method that would include biofuels towards an overall RE target as well as a sub-target for reducing the emissions of transport fuel.

[www.eandt.theiet.org/news/2013/dec/uk-eu-biofuel-policy.cfm](http://www.eandt.theiet.org/news/2013/dec/uk-eu-biofuel-policy.cfm)

## Business & Market

### India

#### [Global institute inaugurates Indian biomass electrification system](#)

The Energy and Resources Institute (TERI), a global independent research organisation has inaugurated a biomass-based village electrification and cold storage project in the Indian district of Sitapur. The project, situated in Bileria village, Sitapur, was inaugurated by Dr. Farooq Abdullah, the Indian Minister of New and Renewable Energy and Dr R K Pachauri, Director General of TERI.

The system incorporates a 50KW advanced biomass gasifier power generation system along with a cold storage capacity of 15MT, an advanced pre-paid metering system and numerous safety features. The system was designed and commissioned by TERI and will be operated by the village community. It will generate enough power to provide 140 households, spread over two villages, with 100W of energy per household. There will also be power monitoring and smart metering at generation and load centres with differential prepaid electricity billing for all customers. The system will also power movement actuated LED street lighting with efficient features and dimming controls and cover productive loads for irrigation systems, flour mills and battery charging.

**[www.renewableenergymagazine.com/article/global-institute-inaugurates-indian-biomass-electrification-system-20131207](http://www.renewableenergymagazine.com/article/global-institute-inaugurates-indian-biomass-electrification-system-20131207)**

#### [Biogas plants to be installed in schools across Kerala](#)

The Agriculture Department in association with the Department of Education is installing biogas plants on the premises of schools providing cooking gas for preparing mid-day meals in schools. As the Agriculture Department has vegetable gardens in 2,500 schools across the state, the waste from the cultivation and food waste can be effectively processed through the biogas plants.

**[www.newindianexpress.com/states/kerala/Biogas-Plants-to-be-Installed-in-Schools/2013/12/22/article1959037.ece#.UvxpUtj0vFw](http://www.newindianexpress.com/states/kerala/Biogas-Plants-to-be-Installed-in-Schools/2013/12/22/article1959037.ece#.UvxpUtj0vFw)**

#### [Himachal's Kinnaur to have SWM system](#)

In a bid to save the fragile ecology of tribal Kinnaur district located along the China border, Kinnaur district administration has decided to launch a door-to-door garbage collection scheme besides setting up a solid waste disposal plant. Before that a sensitization and awareness programme would be launched during which efforts would be made to know total garbage generation in the district.

**[www.timesofindia.indiatimes.com/home/environment/the-good-earth/Himachals-Kinnaur-to-have-solid-waste-management-system/articleshow/27162556.cms](http://www.timesofindia.indiatimes.com/home/environment/the-good-earth/Himachals-Kinnaur-to-have-solid-waste-management-system/articleshow/27162556.cms)**

#### [India to generate 1.5 lakh tons of e-waste a year by 2020: MAIT](#)

India needs to sharpen focus on e-waste recycling and disposal as it is expected to generate about 1.5 lakh tonne of wastage from the use of electronics every year by 2020, IT hardware industry

body MAIT said.

[www.articles.timesofindia.indiatimes.com/2013-12-10/hardware/45033297\\_1\\_e-waste-management-e-waste-rules-electrical-and-electronic-equipment](http://www.articles.timesofindia.indiatimes.com/2013-12-10/hardware/45033297_1_e-waste-management-e-waste-rules-electrical-and-electronic-equipment)

## Gurgaon set to have its own waste plant

With growing generation of waste, owing to the rising population in the city, Gurgaon may soon have its 'own' solid waste management plant.

[www.articles.timesofindia.indiatimes.com/2013-12-11/gurgaon/45077090\\_1\\_waste-plant-bandhwari-faridabad](http://www.articles.timesofindia.indiatimes.com/2013-12-11/gurgaon/45077090_1_waste-plant-bandhwari-faridabad)

## North America

### Pinnacle Renewable Energy - Coast Tsimshian Resources to build a woodpellet plant in British Columbia

[www.bioenergy-news.com/index.php?/Industry-News?item\\_id=7158](http://www.bioenergy-news.com/index.php?/Industry-News?item_id=7158)

### North American pellet exports to Europe continue to increase: Wood Resources International LLC

[www.biomassmagazine.com/articles/9794/north-american-pellet-exports-to-europe-continue-increase](http://www.biomassmagazine.com/articles/9794/north-american-pellet-exports-to-europe-continue-increase)

### \$30mn wood pellet facility on Bayou Casotte

[www.lesprom.com/news/Jackson\\_County\\_supervisors\\_authorize\\_24\\_million\\_for\\_ports\\_wood\\_pellet\\_exporting\\_facility\\_59748/?lng=eng](http://www.lesprom.com/news/Jackson_County_supervisors_authorize_24_million_for_ports_wood_pellet_exporting_facility_59748/?lng=eng)

### 2 biomass plants commissioned in South Carolina

EDF Renewable Energy has begun operations of two biopower plants in South Carolina, a 17.8MW plant in Allendale County and a 17.8 MW facility in Dorchester County. Together, the two plants make up the Pinelands Biomass project.

[www.biomassmagazine.com/articles/9826/2-biomass-plants-commissioned-in-south-carolina](http://www.biomassmagazine.com/articles/9826/2-biomass-plants-commissioned-in-south-carolina)

### Wisconsin cogeneration plant now operational

The plant will process approximately 500,000 tons per year of biomass feedstock, including wood, waste wood and sawdust to generate 50MW of power.

[www.biomassmagazine.com/articles/9827/wisconsin-cogeneration-plant-now-operational](http://www.biomassmagazine.com/articles/9827/wisconsin-cogeneration-plant-now-operational)

### Tractebel to acquire €53.6mn, 65.5MW Ferrari biopower plant in Brazil

[www.biofuelsandbiomass.energy-business-review.com/news/tractebel-to-acquire-655mw-ferrari-biomass-power-plant-in-brazil-for-536m-181213-4148047](http://www.biofuelsandbiomass.energy-business-review.com/news/tractebel-to-acquire-655mw-ferrari-biomass-power-plant-in-brazil-for-536m-181213-4148047)

### Smithfield subsidiary will make biogas in \$100mn JV

[www.bizjournals.com/kansascity/blog/morning\\_call/2013/12/smithfield-subsiary-will-make-biogas.html](http://www.bizjournals.com/kansascity/blog/morning_call/2013/12/smithfield-subsiary-will-make-biogas.html)

## Genesee Biogas LLC receives a \$2mn grant to build biogas plant

The plant will be located in Batavia's Genesee Valley Agri-Business Park.

[www.bizjournals.com/buffalo/news/2013/12/24/state-invests-2m-for-genesee-biogas.html](http://www.bizjournals.com/buffalo/news/2013/12/24/state-invests-2m-for-genesee-biogas.html)

## Concord Blue and LanzaTech to produce fuels from waste biomass resources in Georgia

Concord Blue USA, Inc. and LanzaTech have entered into an agreement to integrate their individually proven technologies to demonstrate the production of fuels and chemicals from waste materials. LanzaTech will install a Concord Blue Reformer at its Freedom Pines facility in Soperton, GA to convert waste biomass from regional forestry operations into syngas. The syngas will be converted by LanzaTech's proprietary gas fermentation process into a range of biofuels and chemicals. The integration and testing at Freedom Pines will serve as an important step towards commercialization of the integrated technologies for multiple projects that both companies have under contract and in development.

[www.pollutiononline.com/doc/concord-lanzatech-produce-fuels-waste-resources-in-georgia-0001](http://www.pollutiononline.com/doc/concord-lanzatech-produce-fuels-waste-resources-in-georgia-0001)

## Brazil reaches new biomass benchmark

A new benchmark was reached in November 2013 in terms of energy generated from biomass in Brazil. The energy source reached a total of 11,250MW of installed capacity (via 474 mills in operation), a number that surpasses the projected capacity for 2019 at the Belo Monte dam, estimated at 11,223 MW.

[www.biomassmagazine.com/articles/9759/brazil-reaches-new-biomass-benchmark](http://www.biomassmagazine.com/articles/9759/brazil-reaches-new-biomass-benchmark)

## Sapphire Energy, Phillips 66 announce joint development agreement

Sapphire Energy Inc. and Phillips 66 have announced a strategic joint development agreement aimed at taking production of algae crude oil a significant step toward commercialization. The companies will work together to collect and analyze data from co-processing of algae and conventional crude oil into fuels. The goal is to complete fuel certifications to ready Sapphire Energy's renewable crude oil, called Green Crude, for wide-scale oil refining.

[www.biomassmagazine.com/articles/9770/sapphire-energy-phillips-66-announce-joint-development-agreement](http://www.biomassmagazine.com/articles/9770/sapphire-energy-phillips-66-announce-joint-development-agreement)

## Neste Oil achieves palm oil certification target two years early

Neste Oil has achieved its long-term target of using only certified palm oil as an input for its renewable diesel production process. The original target, set in 2009, was that 100 percent of the raw palm oil used would be certified by the end of 2015, but the target has been achieved two years early, in 2013.

[www.biodieselmagazine.com/articles/9460/neste-oil-achieves-palm-oil-certification-target-two-years-early](http://www.biodieselmagazine.com/articles/9460/neste-oil-achieves-palm-oil-certification-target-two-years-early)

## Airmall partners with Greenlight Biofuels at BWI Marshall airport

Airmall USA, the leading airport concessions developer in North America and operator of the Airmall at Baltimore/Washington International Thurgood Marshall Airport (BWI Marshall), have formed a partnership with Greenlight Biofuels to recycle Used Cooking Oil (UCO) from tenants in the airport's concession program into biodiesel.

[www.biodieselmagazine.com/articles/9456/airmail-partners-with-greenlight-biofuels-at-bwi-marshall-airport](http://www.biodieselmagazine.com/articles/9456/airmail-partners-with-greenlight-biofuels-at-bwi-marshall-airport)

Himark BioGas digests 73,000 TPA municipal organic waste using its patented AD technology

[www.businesswire.com/news/home/20131210006299/en/Himark-BioGas-Digests-73000-TonsYear-Municipal-Organic#.UviSBdj0vFw](http://www.businesswire.com/news/home/20131210006299/en/Himark-BioGas-Digests-73000-TonsYear-Municipal-Organic#.UviSBdj0vFw)

CR&R, Eisenmann build North American green waste AD project

[www.biomassmagazine.com/articles/9802/crr-eisenmann-build-north-american-green-waste-ad-project/](http://www.biomassmagazine.com/articles/9802/crr-eisenmann-build-north-american-green-waste-ad-project/)

PHG Enegy, GE convert WTE in Tennessee

PHG Energy of Nashville and GE Power & Water business of the General Electric Co. have collaborated to convert electricity from waste materials at a new Covington, Tennessee facility. According to information provided by the Environmental Protection Agency, the system will help to eliminate the release of more than 450 tons of CO<sub>2</sub> into the air each year.

[www.biomassmagazine.com/articles/9842/phg-enegey-ge-convert-waste-to-energy-in-tennessee](http://www.biomassmagazine.com/articles/9842/phg-enegey-ge-convert-waste-to-energy-in-tennessee)

WTE plant by GM Assembly and Detroit Renewable Energy

The plant will process more than 1mn tons of MSW per year into power and steam, while recycling an estimated 40,000 tons of metal. The resulting steam will generate 15.8MW of renewable energy to the assembly plant. Once the project is complete, Detroit-Hamtramck will be the top GM facility in the world by percentage of renewable energy used.

[www.biomassmagazine.com/articles/9819/gm-assembly-plant-to-implement-detroit-waste-to-energy-project](http://www.biomassmagazine.com/articles/9819/gm-assembly-plant-to-implement-detroit-waste-to-energy-project)

## Europe

Demand for pellets expected to grow in Denmark

The government of Denmark has filed a report on its domestic wood pellet market with the USDA Foreign Agricultural Service's Global Agricultural Network, forecasting that pellet imports will increase substantially through the end of the decade. According to the report, Denmark is already the world's largest wood pellet importer, with imports of 2mn metric tons in 2012. By 2020, imports are expected to increase to 3mn metric tons.

[www.biomassmagazine.com/articles/9823/demand-for-pellets-expected-to-grow-in-denmark](http://www.biomassmagazine.com/articles/9823/demand-for-pellets-expected-to-grow-in-denmark)

Evermore Renewable Energy works on 15.8MWe biopower plant in Northern Ireland

The £81m CHP plant will generate enough electricity to power 25,000 homes and businesses in the area having employment generation opportunities of 200 construction jobs 18 permanent jobs.

[www.biofuelsandbiomass.energy-business-review.com/news/evermore-begins-work-on-158mwe-biomass-power-plant-in-northern-ireland-111213-4143748](http://www.biofuelsandbiomass.energy-business-review.com/news/evermore-begins-work-on-158mwe-biomass-power-plant-in-northern-ireland-111213-4143748)

## Energy secretary Ed Davey opens Drax biopower plant [www.bbc.co.uk/news/uk-england-york-north-yorkshire-25306734](http://www.bbc.co.uk/news/uk-england-york-north-yorkshire-25306734)

## Aurivo invests €5mn in biopower plant in Roscommon

The plant will use 30,000 tonnes of woodchip per annum, sourced from forests in the West and North West, resulting in the annual displacement of 5 mn litres of heavy fuel oil. The plant is the first of its kind in the West and Aurivo will become the first large scale milk processor in the country to switch to biomass as a source of energy.

[www.businessandleadership.com/exporting/item/43902-aurivo-investing-5m-in-new/](http://www.businessandleadership.com/exporting/item/43902-aurivo-investing-5m-in-new/)

## Construction of a \$6mn, 1.2MW Hungarian farm biogas plant

The plant will transform animal waste and other farm materials into enough power for 2,500 homes and heat for 1,500 homes annually with 2,000-2,500 tons of fertilizer and soil conditioners as by-products.

[www.upi.com/Business\\_News/Energy-Resources/2013/12/09/Ground-broken-on-6-million-Hungarian-farm-biogas-plant/UPI-92981386565560/?spt=rln&or=1](http://www.upi.com/Business_News/Energy-Resources/2013/12/09/Ground-broken-on-6-million-Hungarian-farm-biogas-plant/UPI-92981386565560/?spt=rln&or=1)

## Construction of Viridor's £154mn gasification, biogas and recycling facility in Glasgow

Once completed, Glasgow Recycling and Renewable Energy Centre (GRREC) will process some 200,000 tonnes of municipal waste each year, using a variety of technologies. The plant will recover enough for around 22,000 homes - saving Glasgow 28,000 tonnes of CO<sub>2</sub> every year.

[www.waste-management-world.com/articles/2013/12/viridor-s-154m-gasification-biogas-and-recycling-facility-underway-in-glasgow.html](http://www.waste-management-world.com/articles/2013/12/viridor-s-154m-gasification-biogas-and-recycling-facility-underway-in-glasgow.html)

## German biodiesel exports on the rise

According to the German Federal Statistical Office, sales between January and September 2013 reached a 1.1mn metric tons (330 million gallons), almost 14% up on the same period in 2012, thus becoming larger net exporter.

[biodieselmagazine.com/articles/9492/german-biodiesel-exports-on-the-rise](http://biodieselmagazine.com/articles/9492/german-biodiesel-exports-on-the-rise)

## France's largest multifeedstock biodiesel plant opens having capacity of 22.5 Mmgpy

[www.biodieselmagazine.com/articles/9491/franceundefineds-largest-multifeedstock-biodiesel-plant-opens](http://www.biodieselmagazine.com/articles/9491/franceundefineds-largest-multifeedstock-biodiesel-plant-opens)

## BASF - Renmatix to turn biomass into sugar

BASF SE (BAS), the world's largest chemical company, agreed to collaborate with Renmatix Inc. to produce industrial sugars from cellulosic biomass.

The companies signed a non-exclusive joint development agreement to use Renmatix's Plantrose technology which will convert wood, straw, agricultural waste and other sources of non-food biomass into sugars that may be used in biofuels and chemical products.

[www.biofuels-news.com/industry\\_news.php?item\\_id=7214](http://www.biofuels-news.com/industry_news.php?item_id=7214)

## [First carbon-neutral university in the UK](#)

Scottish Funding Council has funded £10mn to St Andrews University to become carbon neutral. [www.e2bpulse.com/Articles/386971/St\\_Andrews\\_seeks\\_to\\_be\\_UK\\_s\\_first\\_carbon\\_neutral\\_university\\_with\\_plans\\_for\\_25m\\_green\\_energy\\_centre.aspx](http://www.e2bpulse.com/Articles/386971/St_Andrews_seeks_to_be_UK_s_first_carbon_neutral_university_with_plans_for_25m_green_energy_centre.aspx)

## [Defra launches waste guidance consultation](#)

“The Department for Environment, Food and Rural Affairs (Defra)” is working on plans to simplify guidance on environmental regulations for businesses in the waste management sector.

[www.letsrecycle.com/news/latest-news/legislation/defra-launches-waste-guidance-consultation](http://www.letsrecycle.com/news/latest-news/legislation/defra-launches-waste-guidance-consultation)

### Africa

## [Co Tyrone constructs waste recycling plant in Nigeria](#)

The plant which has capacity to process over 400,000 tonnes of waste per year was designed for WestAfricaENRG.

[www.irishtruck.com/news/ni-firm-complete-nigerian-waste-management-project-011663](http://www.irishtruck.com/news/ni-firm-complete-nigerian-waste-management-project-011663)

### Latin America

## [Amyris produces biodiesel for Firmenich SA. in São Paulo](#)

Amyris sugarcane-based diesel is helping the city meet its goal of reducing fossil fuel use in the public transit system as the city has more than 15,000 buses consuming about 450mn liters (118 million gallons) of diesel per year. Following this, city is working to reduce fossil diesel use by 10% every year through 2018.

[www.domesticfuel.com/2013/12/20/amyris-increases-biodiesel-buses-in-brazil/](http://www.domesticfuel.com/2013/12/20/amyris-increases-biodiesel-buses-in-brazil/)

### Other Countries

## [FMO and Proparco invest in further growth of Sindicatum in Asia](#)

FMO, PROPARCO, and Sindicatum Sustainable Resources have signed a USD 30mn mezzanine facility agreement to grow Sindicatum’s bio-waste-to-energy and landfill gas-to-energy projects in India, Thailand, the Philippines and Indonesia.

[www.eco-business.com/press-releases/fmo-and-proparco-invest-in-further-growth-of-sindicatum-in-asia/](http://www.eco-business.com/press-releases/fmo-and-proparco-invest-in-further-growth-of-sindicatum-in-asia/)

## [ASAN-centers network creates waste management system](#)

Baku, Fineko/abc.az. Clean City OJSC (Təmiz Şəhər) has started to cooperate with the State Agency for Citizens Service and Social Innovations acting under the President of Azerbaijan. According to Clean City, the Company has signed an agreement with the State Agency on cooperation in development of the ASAN centers network (simplified access to governmental services). The agreement is targeted at the creation of a uniform system of solid domestic waste

management, organization of separate collection and removal of paper, plastic and food wastes in all offices of the ASAN network.

[www.abc.az/eng/news/main/78353.html](http://www.abc.az/eng/news/main/78353.html)

## Finance & Investment

### North America

#### Government sanctions Rs. 57 lakhs to install 7 biogas plants

The Attingal municipality will set up 7 high-capacity biogas plants in various public places as part of its efforts to treat biodegradable waste at source.

[www.thehindu.com/news/cities/Thiruvananthapuram/7-biogas-plants-for-waste-treatment-in-attingal/article5439364.ece](http://www.thehindu.com/news/cities/Thiruvananthapuram/7-biogas-plants-for-waste-treatment-in-attingal/article5439364.ece)

### North America

#### A California biodiesel refinery receives \$4.9mn grant to expand its biodiesel operation

The grant was funded through California's Alternative and Renewable Fuel Vehicle Technology Program.

[www.domesticfuel.com/2013/12/24/community-fuels-gets-4-9-mil-to-expand-biodiesel/](http://www.domesticfuel.com/2013/12/24/community-fuels-gets-4-9-mil-to-expand-biodiesel/)

#### The Minnesota Department of Agriculture funds \$2.37mn for bioenergy products

[www.echopress.com/content/237-million-available-bioenergy-products](http://www.echopress.com/content/237-million-available-bioenergy-products)

#### Gevo aims to raise more capital for Luverne, Minn., biofuel plant

[www.startribune.com/business/235308431.html](http://www.startribune.com/business/235308431.html)

#### USDA, DOE fund \$8mn for bioenergy feedstocks

The fund will be used in research grants to develop non-food feedstocks that can be used for bioenergy. The grant is part of a broader effort by the Obama administration to develop domestic renewable energy and advanced biofuels, providing a more secure future for America's energy needs and enhancing rural economies.

[www.domesticfuel.com/2013/12/13/usda-doe-fund-8m-for-bioenergy-feedstocks/](http://www.domesticfuel.com/2013/12/13/usda-doe-fund-8m-for-bioenergy-feedstocks/)

#### Biomass-powered mini-grid project wins USAID funding

In mid-December, The US Agency for International Development awarded \$1mn to Camco Clean Energy to support its biomass mini-grid project in Africa. The funding was awarded under the USAID's "Powering Agriculture: An Energy Grand Challenge for Development" program.

[www.biomassmagazine.com/articles/9838/biomass-powered-mini-grid-project-wins-usaid-funding/](http://www.biomassmagazine.com/articles/9838/biomass-powered-mini-grid-project-wins-usaid-funding/)

## Harper Government funds \$400mn to go green

The fund has been given to big oil pipeline companies in which Suncor was one of the top recipients of federal funding with nearly \$134mn in subsidies for biofuels production (\$117 million) and clean energy (\$16.6 million) projects.

[www.vancouversun.com/technology/Harper+government+gave+pipeline+companies+million+green/9317615/story.html](http://www.vancouversun.com/technology/Harper+government+gave+pipeline+companies+million+green/9317615/story.html)

## USDA funds project to convert beetle-killed trees to biofuel

The USDA has awarded nearly \$10mn to a consortium of academic, industry and government organizations to research the use of insect-killed trees in the Rocky Mountains as bioenergy feedstock. The consortium, led by Colorado State University, will explore recent advances in thermochemical conversion technologies that enable the production of onsite liquid biofuel and coproduct production.

[www.biomassmagazine.com/articles/9810/usda-funds-project-to-convert-beetle-killed-trees-to-biofuel](http://www.biomassmagazine.com/articles/9810/usda-funds-project-to-convert-beetle-killed-trees-to-biofuel)

## EPSRC awards £1.15mn grant to RGU and University of St Andrews researchers for biofuel project in UK

The Engineering and Physical Sciences Research Council (EPSRC) has awarded funding of £1.15m to Robert Gordon University (RGU) and University of St Andrews researchers for a project to investigate photocatalytic bioethanol production using substantial quantities of fibrous waste including cellulose rich straw or recovered paper available within the UK. The project is aimed at finding a cost effective, environmentally friendly way to produce bioethanol from agricultural, forestry or industrial waste products by utilising solar energy.

[www.biofuelsandbiomass.energy-business-review.com/news/epsrc-awards-115m-grant-to-rgu-and-university-of-st-andrews-researchers-for-biofuel-project-in-uk-041213-4140353](http://www.biofuelsandbiomass.energy-business-review.com/news/epsrc-awards-115m-grant-to-rgu-and-university-of-st-andrews-researchers-for-biofuel-project-in-uk-041213-4140353)

### Europe

## Biochemtex to invest \$200mn in North Carolina cellulosic biofuels facility

The plant will produce 20mn gallons per year of cellulosic biofuel from locally-grown energy crops, agricultural residues, and woody biomass.

[www.bioenergy-news.com/index.php?/Industry-News?item\\_id=7136](http://www.bioenergy-news.com/index.php?/Industry-News?item_id=7136)

## EBRD gives €300mn for Ukrainian alternative energy development

[www.en.for-ua.com/news/2013/12/09/151212.html](http://www.en.for-ua.com/news/2013/12/09/151212.html)

### Other Countries

## ADB issues US\$69mn to improve waste management in Tashkent

The ADB will issue loan from its ordinary resources for 20 years, including a 5-year period under its standard rate. The project aims to provide an improved SWM system in Tashkent city, resulting in upgrading urban infrastructure and services. The project will support the development of an

international standard sanitary landfill, rehabilitation of transfer stations and a modernization of the waste collection and transfer fleet. Within the project, it is planned to purchase garbage trucks, 750-litre and 1000-litre garbage containers, and special equipment for sanitary landfills.  
[www.hispanicbusiness.com/2013/12/9/adb\\_issues\\_us\\_69m\\_to\\_improve.htm](http://www.hispanicbusiness.com/2013/12/9/adb_issues_us_69m_to_improve.htm)

## Research & Development

### India

#### JOil demonstrates strong trend of improving yields from large scale India field trials

JOil (S) Pte. Ltd., a scientific bioenergy crop developer of a new generation of Jatropha, has achieved an average seed yield of 3.53 metric tonnes per hectare in the third year of its large scale India field trials. Unpruned, the yield will be 4.42 metric tonnes per hectare. These results place JOil's elite Jatropha varieties on track to deliver a Year 4 projected yield of more than 4.5 metric tonnes per hectare. This puts JOil seedlings within reach of the target yield of 5 metric tonnes per hectare at which point large-scale commercial viability is achieved.

[www.moneylife.in/business-wire-news/joil-demonstrates-strong-trend-of-improving-yields-from-large-scale-india-field-trials/37761.html](http://www.moneylife.in/business-wire-news/joil-demonstrates-strong-trend-of-improving-yields-from-large-scale-india-field-trials/37761.html)

### North America

#### Cloning technology being utilized in biomass study

Researchers at the University of Georgia are using cloning technology to develop faster-growing sweetgum trees that can be used for biomass energy generation or for pulp and paper production. As per the research, the cloning technology helps grown trees to have much more consistent characteristics such as wood density and fiber length, than conventionally propagated material.

[www.biomassmagazine.com/articles/9775/cloning-technology-being-utilized-in-biomass-study](http://www.biomassmagazine.com/articles/9775/cloning-technology-being-utilized-in-biomass-study)

#### Proterro issued patent for sugar-making process

The US Patent and Trademark Office has issued a patent to Proterro Inc., protecting Proterro's unique, biosynthetic sugar-making process.

Proterro has developed a process that integrates unique transgenic sugar-producing microorganisms with a robust, modular photobioreactor made from off-the-shelf materials. This process yields a fermentation-ready sucrose stream, rather than a mixture of sugars, simplifying downstream processes and reducing their costs.

[www.biomassmagazine.com/articles9797/proterro-issued-patent-for-sugar-making-process](http://www.biomassmagazine.com/articles9797/proterro-issued-patent-for-sugar-making-process)

#### Breakthrough for enhancing algae biofuel production

Researchers of Scripps Institution of Oceanography at UC San Diego have developed a method for greatly enhancing biofuel production in tiny marine algae.

[www.fis.com/fis/worldnews/worldnews.asp?](http://www.fis.com/fis/worldnews/worldnews.asp?)

[monthyear=&day=2&id=65079&l=e&special=0&ndb=0](#)

## Report highlights Canadian biogas potential

In Canada, the Biogas Association recently published a report that highlights the potential of its domestic biogas sector. The study, titled "Canadian Biogas Study: Benefits to the Economy, Environment, and Energy," was authored by Kelleher Environmental under a contract.

According to the report, biogas sources in Canada have the potential to contribute 810MW of electricity to the nation's energy supply, equating to approximately 1.3% of demand and can reduce the nation's GHG emission by 37.5mn metric tons of CO<sub>2</sub> equivalent per year.

[www.biomassmagazine.com/articles/9841/report-highlights-canadian-biogas-potential](http://www.biomassmagazine.com/articles/9841/report-highlights-canadian-biogas-potential)

### Europe

## Mcast in €2m biomass research centre project

The Malta College of Arts, Science and Technology is a partner in a project worth over €2.1mn that aims to create a research centre for supporting local authorities and small and medium-sized enterprises, mainly in the building and construction sector, to implement sustainable consumption and production strategies, environmental sustainability and renewable energy exploitation.

The project, called Crim-Safri, will also set up a biomass pilot plant within an SME to convert wood waste into energy. This will be fed into the national grid to generate revenue for the firm, besides reducing the amount of waste it needs to dispose of.

[www.timesofmalta.com/articles/view/20131208/education/Mcast-in-2m-biomass-research-centre-project.498079#.Uvyh99j0vFw](http://www.timesofmalta.com/articles/view/20131208/education/Mcast-in-2m-biomass-research-centre-project.498079#.Uvyh99j0vFw)

## Grass as the new biofuel on marginal land: European Research

[www.agriland.ie/news/grass-as-the-new-biofuel/](http://www.agriland.ie/news/grass-as-the-new-biofuel/)

## Newly discovered Enzymes degrade hard-to-digest biomass into Constituent Sugars

Scientists at the University of York have made a significant step in the search to develop effective 2<sup>nd</sup> generation biofuels. Researchers have discovered a family of enzymes that can degrade hard-to-digest biomass into its constituent sugars. The use of 'difficult-to-digest' sources, such as plant stems, wood chips, cardboard waste or insect / crustacean shells, offers a potential solution and fuel extracted from these sources are known as '2<sup>nd</sup> generation' biofuels, research says.

[www.azocleantech.com/news.aspx?newsID=19398](http://www.azocleantech.com/news.aspx?newsID=19398)

## Unique industry-academia networks in industrial biotechnology and bioenergy launched

The Biotechnology and Biological Sciences Research Council (BBSRC) has funded 13 unique collaborative 'Networks in Industrial Biotechnology and Bioenergy' (BBSRC NIBB) to boost interaction between the academic research base and industry, promoting the translation of research into benefits for the UK.

The networks pool skills from academia and business to develop research projects with the potential to overcome major challenges in the industrial biotechnology and bioenergy arena. They

also allow new members to come on board with skills that can benefit the group. These networks will unlock the huge potential of biotechnology and bioenergy, such as finding innovative ways to use leftover food, and creating chemicals from plant cells.

[www.eurekalert.org/pub\\_releases/2013-12/babs-uin121713.php](http://www.eurekalert.org/pub_releases/2013-12/babs-uin121713.php)

## Other Countries

### Products by ZCM Green Innovation Sdn Bhd

Research team of Datuk Seri Tan Hoe Beng, has developed products which can help to address climate change and can be of use in the agriculture, energy and water conservation sector.

[www.thestar.com.my/Business/SME/2013/12/21/Green-believer-Company-says-plants-offer-new-biofuel-possibilities.aspx/](http://www.thestar.com.my/Business/SME/2013/12/21/Green-believer-Company-says-plants-offer-new-biofuel-possibilities.aspx/)