
# Newsletter IEA Bioenergy Task 37: 05/2019

## Biogas is fully back on the agenda

### Michigan State University turns zoo waste into biogas

MSU researchers worked with the Detroit Zoo to build the first anaerobic digester at a zoo in North America, creating clean energy capable of powering some of the zoo's operations. You might say, they're turning poo into power. Some 20 years after the first digesters in Pyönyang's and Munich's zoo the US searchers came up with a new design. The Detroit Zoo digester powers its animal hospital, which operates at 100-150 kilowatts per hour. For reference, a typical household in the United States uses about 900 kilowatts of electricity per month. In addition to helping reduce electricity costs, benefits include repurposing animal and food waste and reducing greenhouse gases.
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### Development of a 5 MW biogas plant in Sao Paulo

On 3rd December 2018, TIM Brazil reported that it has signed a contract to start-up the first biogas plant for municipal solid waste with 5 MW of power for remote self-consumption in Brazil. The plant will serve 864 sites (antennas) in the concession area of Eletropaulo (now called Enel Distribuição), São Paulo. With this project, the company will be the first operator of the country to use biogas to generate energy inside a large urban center to supply its own facilities, making it a pioneer in distributed power generation in the telecom sector. By 2020, TIM intends to achieve 60% of its energy matrix from renewable energy sources, such as solar, wind, biogas and hydroelectric generating plants, which will save up to 22% on energy costs.
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### Sebigas contracted to build 17.5 MW biogas project in Brazil

Italy-based biogas developer Sebigas has announced its Brazilian division, Sebigas Do Brasil, has been awarded a contract to construct a 17.5 MW biogas plant in southern Brazil. The biogas plant will be located in Guariba, São Paulo, Brazil, near Raízen's second largest ethanol and sugar mill. The mill processes more than 5 million tons of sugarcane annually and generates high volumes of vinasse coproduct, which the new biogas plant will take in as feedstock. According to information released by Sebigas, the biogas plant will receive approximately 9,200 cubic meters of vinasse each day, producing approximately 187,000 normal cubic meters of biogas. The resulting biogas will be used to produce 7.5 MW of electricity, which will be sold to the national grid. Digested vinasse will be used as fertilizer.
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### 30 million US$ biomethane equity investment

Advanced renewable fuels and biochemicals company, Aemetis has announced that its subsidiary, Aemetis Biogas, has closed a $30 million (€26 million) equity investment. The investment is for a project that will allow Aemetis Biogas to build, own and operate dairy biomethane digesters, pipelines and gas clean-up and compression facilities primarily under 20 year agreements with dairy farms in California. project will connect about a dozen dairies to Aemetis' ethanol plant in Keyes, California, and will later expand to add a further three dozen local dairies. The plant already supplies Wet Distillers Grain feed to about 100 dairies. 6Aemetis' 60 million gallon ethanol plant is capable of using biogas to replace petroleum natural gas, to produce a lower carbon biofuel and generate additional Low Carbon Fuel Standard credits.

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### India to build 5,000 biogas plants by 2023

India's minister of Petroleum and Natural Gas, Dharmendra Pradhan, announced that an estimated 5,000 compressed biogas (CBG) plants were to be built across the country by 2023, The plants, extracting biogas from agricultural residue, cattle dung and municipal solid waste, will have an approximated annual capacity of 15 million tons. Following the launch of the Sustainable Alternative Towards Affordable Transportation (SATAT) initiative, Pradhan outlined that CBG will be both identified and promoted as an alternative. The SATAT initiative's goal is to predominantly boost the availability and affordability of renewable transport fuels, as well as promote better use of agricultural waste. It will also provide an additional source of revenue to farmers. According to Pradhan, the government intends to move towards a gas-based economy by increasing the share of natural gas in India's energy basket from 6-7% to 15% by 2020. CBG has been identified as a potential solution for the rising demand for natural gas in both the industrial and transport sectors.

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### Engie to invest 2 billion Euro into biogas by 2030

ENGIE announced that it is beginning the process of mobilizing €800 million to develop biogases over the next five years, with estimations of a total of €2 billion to be invested by 2030. The objective of the investment is to support the sector's goals to reduce costs by roughly 30 to 40% by 2030 and achieve cost parity with natural gas. They are convinced that gas will gradually become green and will play a key role in the decarbonation of France, along with other sources of clean energy generation. Produced on the territory, green gas is easily storable and non-intermittent. As such, it has unique properties that make it the natural partner of electrical renewable energy sources.

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### American Biogas Council estimates potential for 14,000 more biogas plants

The American Biogas Council (ABC) has released a statement addressing the results of the fourth National Climate Assessment. The Climate Assessment's conclusions are alarming. In the US alone, EPA found in 2014 that each year 258 million tons of municipal solid waste was generated, and that digestible organic materials such as waste paper, yard trimmings and food waste were the largest component. In addition to municipal solid waste, there are trillions of tons of industrial food and agricultural processing waste, municipal wastewater and animal manure. Building more biogas systems ensures the capacity to divert these materials from disposal, thus preventing harmful

emissions. Today, there are 2,200 operating biogas systems, and there is potential to build at least 14,000 more. Doing so would produce enough energy to power 7.5 million American homes and reduce emissions equivalent to removing up to 15.4 million passenger vehicles from the road.

**Renewable gas project in Cork to increase on-farm AD**

Gas Networks Ireland has announced its new renewable gas project, GRAZE. The project aims to inject large volumes of renewable gas into the natural gas network and has been shortlisted for €8 million of funding under The Climate Action Fund. The total cost of the project is around €29 million and is also part of a larger investment with Gas Networks Ireland. The Mitchelstown, Co. Cork based project will have a Central Grid Injection facility. Mitchelstown has been chosen by Gas Networks Ireland due to the area's large potential for farm-based AD plants. The plants can be fed a variety of feedstocks, including food waste. The facility will be the first of 17 transmission connected facilities that will deliver renewable gas into the natural gas networks. In addition, a renewable gas logistics operation is also to be installed along with two Compressed Natural Gas (CNG) stations and a grant scheme to support circa 74 CNG vehicles.

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