

## Newsletter IEA Bioenergy Task 37: 4/2017

### News from IEA Bioenergy

#### Algae Bioenergy-State of Technology

On 25 January 2017 Task 39 of IEA Bioenergy held a webinar on algae cultivation and biofuel production. The webinar highlights the findings of a new comprehensive IEA Bioenergy report providing an international update on the status and prospects for using microalgae and macroalgae as feedstocks for biofuels and bioenergy. The objective of the new report is to update and expand on a previous report and cover microalgae and macroalgae derived bioenergy, biochemical and thermochemical conversion pathways, biorefineries and non-energy bio-products, as well as economics and sustainability. The report, the contributions of the webinar including questions and answers can be downloaded for free.

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#### IEA Bioenergy Publication on Bioenergy's role in balancing the electricity grid

The objective of the publication, initiated and sponsored by the European Commission, is to identify those areas in the grid system where bioenergy in balancing the grid & providing storage options can play a strategic role, and to promote the commercialization of a diverse set of such bioenergy applications and processes. In countries where wind and solar are expected to play a dominant role in the energy transition, integration of these intermittent energy sources with the power grid places significant pressure on the grid operation. Bioenergy can be used to relieve the pressure on system level management of the grid by making the grid more stable. Balancing can be roughly divided into two time periods: Short- and midterm balancing. Biomass could play a role in these schemes in various ways: for instance, renewable CO<sub>2</sub> derived from the separation of biomethane in anaerobic digestion systems or other processes could be converted to additional biomethane through microbial or thermochemical methanation.

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#### New Case studies of IEA Bioenergy Task 37

Two new case studies from The Netherlands have been published addressing two of the hottest topics in the current European biogas development. One of the case studies addresses small farm scale mono-digestion of dairy slurry for energy independence and reduction in greenhouse gas emissions. The [Den Eelder](#) farm decided to build a small (66 kWel.) biogas plant digesting cow manure only. Recently the farm doubled the capacity from 7'000 t/a to 15'000 t/a of fresh manure. The second case describes a centralized upgrading plant at Wjister. Three local farmers deliver their biogas from their own facilities via a biogas pipeline to the [Green Gas Hub](#) at Wjister. The farmers do not have to invest in a refining installation to achieve natural gas quality. The Wjister site also boasts a fourth installation, which is used to refine biogas in a pilot-plant to bio-LNG.

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