

## TOPIC BRIEF: **POCKET-SIZED DIGESTERS**

The following topic brief summarizes discussions held during an EU level exchange sessions (T4.1) among BiogasAction project partners. It aims at providing the main outcomes of the discussions. Each topic brief focuses on one specific development topic for biogas in Europe. Topic briefs can be downloaded at <http://biogasaction.eu/downloads>

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### **What is the topic about?**

Small-scale or pocket digestion is a technology where the anaerobic digestion process is applied to proprietary biomass flows for the on-site production of renewable energy. Pocket digestion is a tool for agricultural companies to increase self-sufficiency in terms of energy demand and thus to be less dependent on fluctuating energy market prices.

In addition, the farmer is able to produce renewable energy using residual (waste) streams inherent to the daily operation of his agricultural company, and at the same time actively help achieve the European goals for renewable energy.

Although there is no internationally accepted legal definition for pocket digestion, there is a consensus that the term “pocket digestion” is applicable to installations with a proprietary biomass supply that produce energy in function of the proprietary energy demand.

It could be characterized by being physically small in size rather than by its output.

### **What is at stake?**

Is there a place for such digesters in the EU?

- If the driver is solely renewable energy then the practical and legislative problems will deter all but the most enthusiastic people.
- If the diversion of food or other organic “waste” from the waste stream is the primary motivation then it will usually be far less complicated to contract with a larger AD plant to take the material
- It is the “holistic” system that is likely to be the major opportunity – driver.

Things that Get in the Way

- Waste regulations
- ABPR
- Health and Safety
- Lack of standards for biogas boilers
- Renewable energy incentives have largely removed the “polluter pays” principle
- Lack of awareness



## Partners experiences

Experience in the Netherlands:

- Four such systems have been built in the Netherlands:  
<http://www.enki-energy.com/en/references/>

Experience in France:

- A cluster of around 5 houses combined to build an experimental AD version of a septic tank in western France  
<http://www.enerpro-biogaz.fr/exploitations-agricoles.php>  
<http://nenufar-biogaz.fr/?lang=en>

Experience in the UK:

- Installation of a micro-digester for the digestion of dog faeces at the edge of a popular walking area in Malvern, England. The gas is used for a street lamp. Incidentally, SWEA gave some advice to this group several years ago.  
<http://www.bbc.co.uk/news/uk-england-hereford-worcester-42565633>

Other EU experiences are described at the link below:

[http://www.biogas-e.be/sites/default/files/attachments/pocketdigestion\\_brochure.pdf](http://www.biogas-e.be/sites/default/files/attachments/pocketdigestion_brochure.pdf)



## Key findings and lessons learnt:

- Pocket digestion is a tool for agricultural companies to increase self-sufficiency in terms of energy demand and reduce the environmental impact (for example greenhouse gas emissions) of residual waste streams
- Technology solutions exist across Europe that have been deployed in the UK, BE, NL, France, etc.
- It is an opportunity in a “bright new world”:
  - with less packaging – especially plastic packaging,
  - more public pressure for holistic solutions,
  - a greater emphasis on local produce
  - and AD regulated better (ie not simply treated as a Waste Management system).

