



IEA Bioenergy Task 37



Country Report

Austria

AD plants



Summary of AD Plants: *Number of plants and gas produced expressed as GWh*

Plant type	Number of plants (approved)	Energy production (GWh/year) *
Sewage sludge and landfills	45 (71)	30,73
AD plants	291 (368)	554,33
Total	336 (439)	585,06

Upgrading plants



	technology	year	size [m ³ CH ₄]
Pucking	PSA	2005	6
Eugendorf	PSA	2008	40
Bruck an der Leitha	Membrane	2008	170
Margarethen	Membrane	2008	800
Asten	water scrubber	2009	450
Engerwitzdorf	amine scrubber	2010	130
Rechnitz	PSA	2010	40
Leoben	amine scrubber	2010	130
Wiener Neustadt	Membrane	2011	120
steindorf	PSA	2012	150
schlitters	PSA	2012	150
Häusle		Okt 13	550
Total			2.736



Trend of plants



Trends in numbers of AD Plants:

- Expecting of reduced amount of biogas plants due to economical situation

Potential biogas production 2020-2030 with specific conditions

- New substrates expected (run on easy available waste already started)

Trends in numbers of Up-grading Plants:

- 800 Million Nm³ (Energy Strategy Austria)

Utilisation



Utilisation of the biogas expressed in GWh/year:

Utilisation type	GWh
Electricity	564
Heat	640
Vehicle fuel (4)	6.64 *
Gas grid (10)	12.84 *

Source: Ökostrombericht 2013; Franz Kirchmayr (Arge Kompost & Biogas)

* = max. production

Number of vehicles 7,000 - 8,000



Digestate utilisation



Digestate utilisation including both digestate from WWTP and biowaste digestion

- Allowed (depending on local conditions and composition of digestate)

Ongoing development and trends and existing regulations

- No changes or trends in new regulations expected (depending on EU)



Performance



Performance Data (if available):

No data available

- **electrical efficiency**
- **total energy efficiency**
- **methane emissions**

Economic Data (if available):

No data available.

- **Investment costs**
 - **AD plant**
 - **Up-grading**

- **Operating Costs**

Feed in tariffs



**19,50 Euro cent / kWh up to 250 kWe,
16,93 Euro cent / kWh from 250 - 500 kWe
13.34 Euro cent / kWh from 500 - 750 kWe
12.93 Euro cent / kWh for higher than 750 kWe**

**+ 2 Euro cent / kWh if biogas is upgraded
+ 2 Euro cent / kWh if heat is used efficiently**

It is required that a minimum of 30% manure is used as a substrate to get the feed-in tariff.
If organic wastes are used, the feed-in tariff is reduced by 20%.

Older biogas plant, where subsidies are running out, can apply for a longer subsidising period, in total 20 years.

Furthermore, a supportive measure for existing plants (built before 2009), up to 4 Euro cent/kWhel can be granted for securing substrate provision, in 2013 it is 3 cent/kWhel



Strategy



National Strategy/Support for Exploitation of Biogas:

There is no national strategy!

Biomass and Biogas

- 2012 → 2.537 GWh

Plan

- 2015 → 3.126 GWh

- 2020 → 3.826 GWh



Challenges



Obstacles and Challenges:

- AD plant permitting
→ Small scale plants
- Environmental licenses
→ Methane emissions
- Grid connections (electricity, heat, gas pipeline)
→ Size of the upgrading plants
- Digestate utilisation
→ bringing digestate to a product with value

Research activities



Research Activities:

International projects

- TherChem (Thermochemical pre-treatment of brewers spent grain)
- FAB
- Green Gas Grid

National projects

- 3 competence centres are dealing with the topic of biogas
 - Bioenergy 2020+ (pre-treatment, algae, abattoirs, viscosity)
 - ACIB (immobilisation of hydrolytic organisms)
 - AlpS (pre-treatment)
- Klimoneff (New measuring system for emissions at biogas plants)



Biogas Science 2014

Vienna | Austria

International Conference on Anaerobic Digestion
26th - 30th October 2014

www.biogas2014.boku.ac.at