French situation of AD and biogas valorization in 2008/09

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- Creation of an “heat fund” - Grenelle of environment (start of the year 2008)
  - To promote the RE-heat use in industry, building and agriculture
- Report on development of on-farm AD (ministry of agriculture & fishery, and ministry of ecology)
- Study report of the French Agency for Sanitary Security, Environment and Work (october 08)
  - Possibility to inject biogas from landfill, biowaste, agricultural and food-processing industry waste into the grid after cleaning and upgrading
  - Not possible presently for industrial waste and urban sludge
- On-farm AD tender (ministry of agriculture and fishery, march 09)
  - 10 M€ to promote new individual or collective projects
  - Subsidies : from 200 k€ (ind.) to 375 k€ (coll.)/project add. FEDER fund possible
  - 75 projects (?)
Heat fund

- **Biomass**: + 3,800 MToe/yr (5,200 MToe/yr in 2020)
  - + 1,850 MToe plants > 1,000 Toe/yr
  - + 1,950 MToe others plants

- **2 systems**
  - Projects > 1,000 Toe/yr → choice after national consultation
  - Projects < 1,000 Toe/yr → general grants with selected conditions

- **Domains**:
  - Geothermal energy valorized with or without heat pumps
  - Solar thermal energy
  - Biomass energy from forest & agriculture – including biogas

- **With grants for new projects**

- **To obtain an energy price lower than 5 % of fossil energy price**
Etat des lieux du développement des installations de méthanisation des déchets ménagers

Tonnage annuel entrant (t/an)
- 300 000
- 150 000
- 30 000
- -30 000
- -150 000
- -300 000

Installations en service (6)
Installations en projet (17)
MSW AD plants (6)

OMR = ordures ménagères résiduelles
biod = biodéchets

Source : ADEME / GEODE / Guillaume BASTIDE - Olivier THEOBALD
Cartographie : ADEME / DOBS / Katia BECAUD

- Décembre 2008 -

French MSW AD plants
MSW AD units and projects until 2015
French On-farm AD

- 11 plants
  - UASB: 9
  - batch (manure & slurries): 2
  - codigestion slurry and IAA: 1
- Treatment capacity: 60,000 T/y
- +50 projects in end of 2010: 550,000 T/y
- Electricity production: 17.5 GWh
- +50 projects: 200 GWh
On-farm AD in the future

- 1000 units in 2013 (mean P= 200 kWél.)
- question: will the agricultural crops and waste be sufficient?
ADEME studies

• 2008
  - study of the use of energy crops on-farm AD projects : feasibility and profitability in the French situation
    results in october 2009
  - writing an AD technical follow-up methodology
    results in the summer 2009
  - follow-up of an on-farm batch process
    results in 2011 (3 years)

• 2009 :
  - start of a AD study market in France with biogas valorization (cofin. French Gas Grid Co.)
    results in the end of 2009
  - start of a study about profitability of on-farm AD, with revision of feed-in tariff of electricity
    results in the end of 2009
  - national work group (ministries, French Gas co., municipalities association, etc.) on injection of up-graded biomethane into the natural gas grid
  - (to come) study about MSW biogas quality for up-grading into the natural grid
ADEME subsidies on on-farm AD projects in 2008

- around 2 M€ subsidies
- 16 projects – capacity of OW : 200 000 T/y
  - 12 on-farm AD projects - 150 000 T/y (one = 80 000 T/y)
  - 4 food processing waste AD - 50 000 T/y
- Codigestion first
- GHP : 17 GWh
- Electricity : 13,7 GWh.