Questionnaire Proposal Sewage Sludge

NEWAPP is a research project founded by the European Commission under FP7 program, aiming to develop a new valorization pathway for wet biomass waste streams, such as the organic fraction of municipal waste, sewage sludge or other industrial biodegradable waste like waste from food industry, vegetable or agricultural waste, sludge from waste or wastewater treatment through HTC technology.

The HTC process converts wet biomass waste streams into carbon. Instead of releasing carbon dioxide into the atmosphere, the carbon biomass is completely transformed into a peat-like material. This carbon can be employed for instance for energy generation, or as a secondary raw material.

Desired raw materials for the HTC process are, for instance, vegetable material, wood, green pruning, compostable waste, paper, pulp, or similar lignocellulose or cellulose substrates with a water content in the range of 30 to 90%. Other contents should be limited to up to 20%. We have identified sewage sludge as a potentially interesting stream.

We seek your cooperation to characterize this waste stream at European level.

Questionnaire

General data

1) Country

2) Name of municipality/ region

3) Plant size in persons equivalent

4) Amount of wastewater treated (m3/day)

Sludge quantities and characteristics

5) Generated sludge (in tons/y)

6) Moisture content of the different biodegradable waste streams (in %)

7) Other characteristics of the biodegradable waste

a. Elementary composition (in %)

C O H N Metals

b. pH value

c. Higher heating value (kcal/kg)

d. Bulk density (kg/m3)

e. Biomass density (kg/m3)

Collection scheme and quantities

8) Is the sludge dewatered (e.g. in a centrifuge or filter system)?

9) Do you use polymers for de-watering?

10) Do you observed seasonal variations?

Current treatment system for the sludge

11) Current treatment system(s) of collected sludge

☐ Fermentation ☐ Composting ☐ Incineration ☐ Landfilling ☐ Other

12) Outputs of different treatment systems (in tons/y)

Compost biogas others (state which)

13) Treatment costs per ton of threated waste for the different treatment systems

14) Main problems/drawbacks of your current treatment systems