## 1. Chapter 3.4: biogas flare entry 3

The main purpose of a flare is to effectively oxidate the methane and other gases and not to produce heat or other energy outcomes. Therefore, it is not the efficiency as no energy output etc. is requested but much more the effectivity. Better wording would be high effectivity gas flare.

## 2. Chapter 3.5: biogas installation

Rightly the storage of digestate is included in a biogas installation, the same shall be also done in gasification installation with the second product which maybe is ash or charcoal.

## 3. Chapter 3.7: biogas storage

Within 3.20 the fermenter is defined as digester. Therefore, the same term should be used here

#### 4. Chapter 3.9: biomass

As sludge and waste waster are not in general not only effluents from processes with organic matter, the limitation to sludge and waste wate from organic processes needs to be added. The phrase would then be "sludge, waste water from organic processes"

# 5. Chapter 3.13: biomethane potential of biomass

It is usually referred to volatile solids

## 6. Chapter 3.30 injectable biomethane

Due to the Paris Agreement the gas grid will face a switch transporting renewable gases only. Therefore, in future the requirements of consumer devices need to be fulfilled for biomethane grid injection. There is no need to stay on natural gas quality. First countries change already their requirements for gas grid injection and so avoid unnecessary too high costs for upgrading biogas to biomethane.

#### 7. Chapter 3.42

Odorization will also be done to biomethane

#### 8. Chapter 3.45: organic loading rate Note 1

The organic loading rate says nothing about the efficiency and the degradation of substrates of the digestion process.

#### 9. Chapter 3.47: power to gas

Power to gas is usually H produced from electricity

#### 10. Chapter 3.53: solid retention time

Solid retention time can only be the retention time of the fed dry mass or the total volatile solids but not the biomass defined under 3.9 as there the definition is based on fresh mass.

### 11. Chapter 3.55: specific biogas yield

As in English publication organic dry matter is usually called total volatile solid. This term should be also used here. Additionally, the expression in volumetric biogas does not allow

any exact determination it would be much better to express it at least additionally through  $kWh_{Hi} kg_{VS}^{-1}$  or  $MJ_{Hi} kg_{VS}^{-1}$ 

## 12. Chapter 3.56

Substrate is a general term for possible feedstock used in processes. Using this term here for the biodegradable part of biomass would cause only confusion. Better would be biodegradable biomass. Additionally it is not the part which will be degraded but much more can be biological degraded.

#### 13. Chapter 3.61: treated digestate

The definition written here does not remove nutrients but much more concentrates them within the treated digestate

#### 14. Table A.1 Power to gas from

Does Hydrogen production from electricity generated from biomass really make sense?

## 15. Chapter B2.5: digestate storage

Within different regions of the world the definition of basins can vary a lot. To make sure that from these basins no environmental harm to groundwater can occur it is important to add the word sealed to basins.

## 16. Chapter B2.6: digestate conversion

Please delete aeration as an digestate treatment option as it causes ammonia which is restricted under Emission reduction directive (2016/2284/EU)

### 17. Chapter B 2.10: power to Gas

There are too many descriptions in here what is meant by power to gas. Usually, it means hydrogen production via electrolysis

# 18. Chapter B.3: Classifications

The definitions within B.3.1 are very unprecise and does not bring any value. Please delete them.

#### 19. Table B.1

Please delete in the first column *per hour*. 1  $\rm m^3$  is one  $\rm m^3$ . Please add in the second column to kWh  $\rm _{HL}$  Around 60 % of electrical efficiency can only be achieved in new gas turbines. I am not sure if this is a worthy real information.