

Gasification in the Netherlands: a birds eye view

International Seminar on Gasification 2016, Malmö

Greening the gas: a necessity



ontras



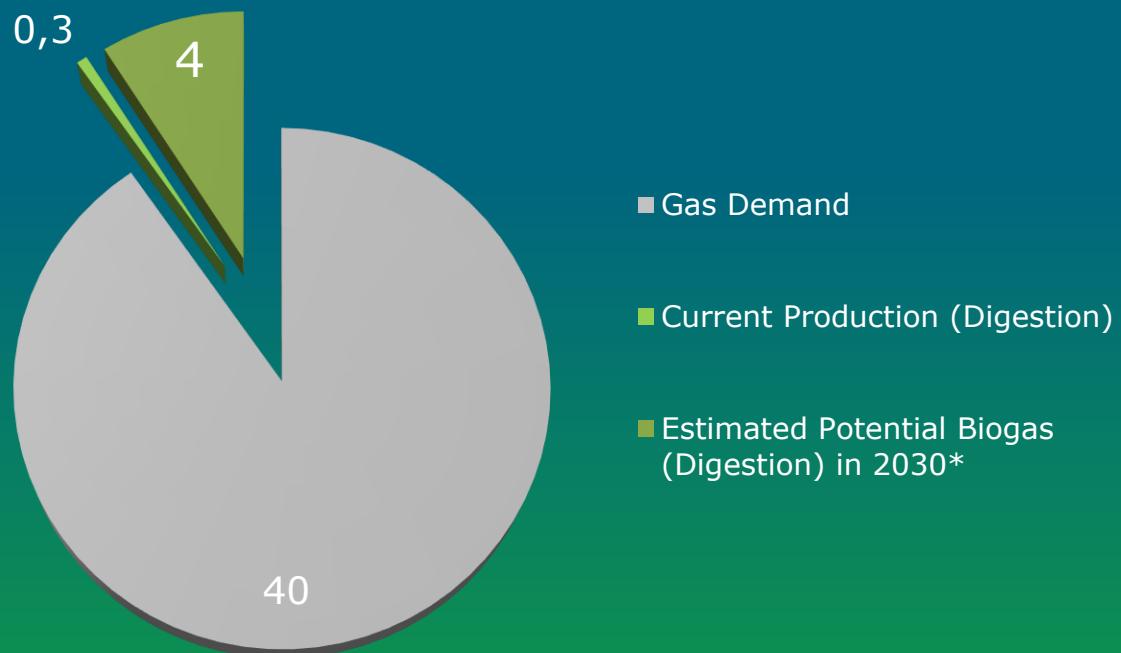
Joint Declaration

Dublin, 23 April 2015

Green Gas Initiative of European gas transmission operators
Energinet.dk, Fluxys Belgium, Gasunie, GRTgaz, Swedegas, Gaznat and ONTRAS

“We aim to establish a 100% CO2-neutral gas supply by 2050”

Greening the gas: the Dutch case



* Source: Routekaart Groen Gas

Greening the gas: the next step

DIGESTION

*a biological process
which needs
efficiency*



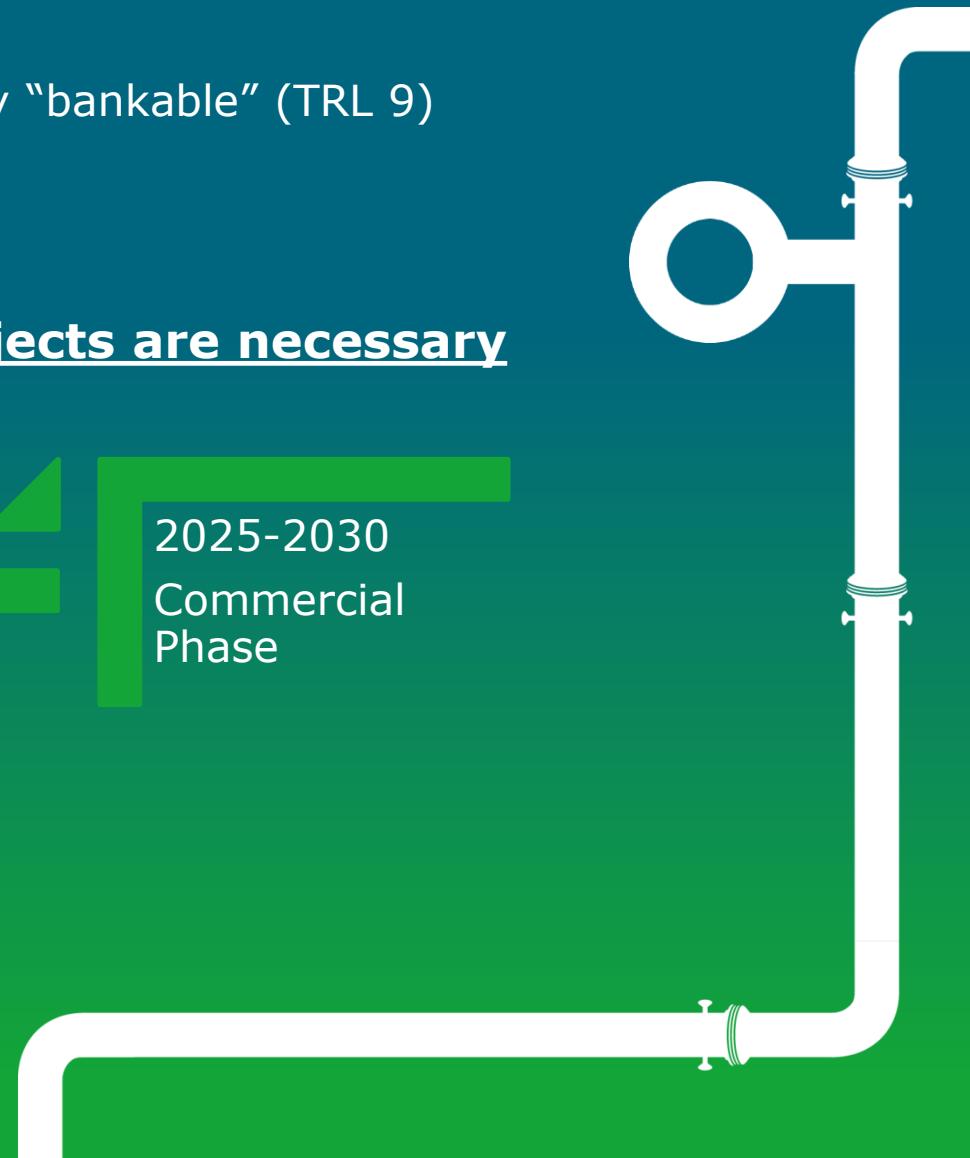
GASIFICATION

*a thermal process which
needs
innovation/upscaling*

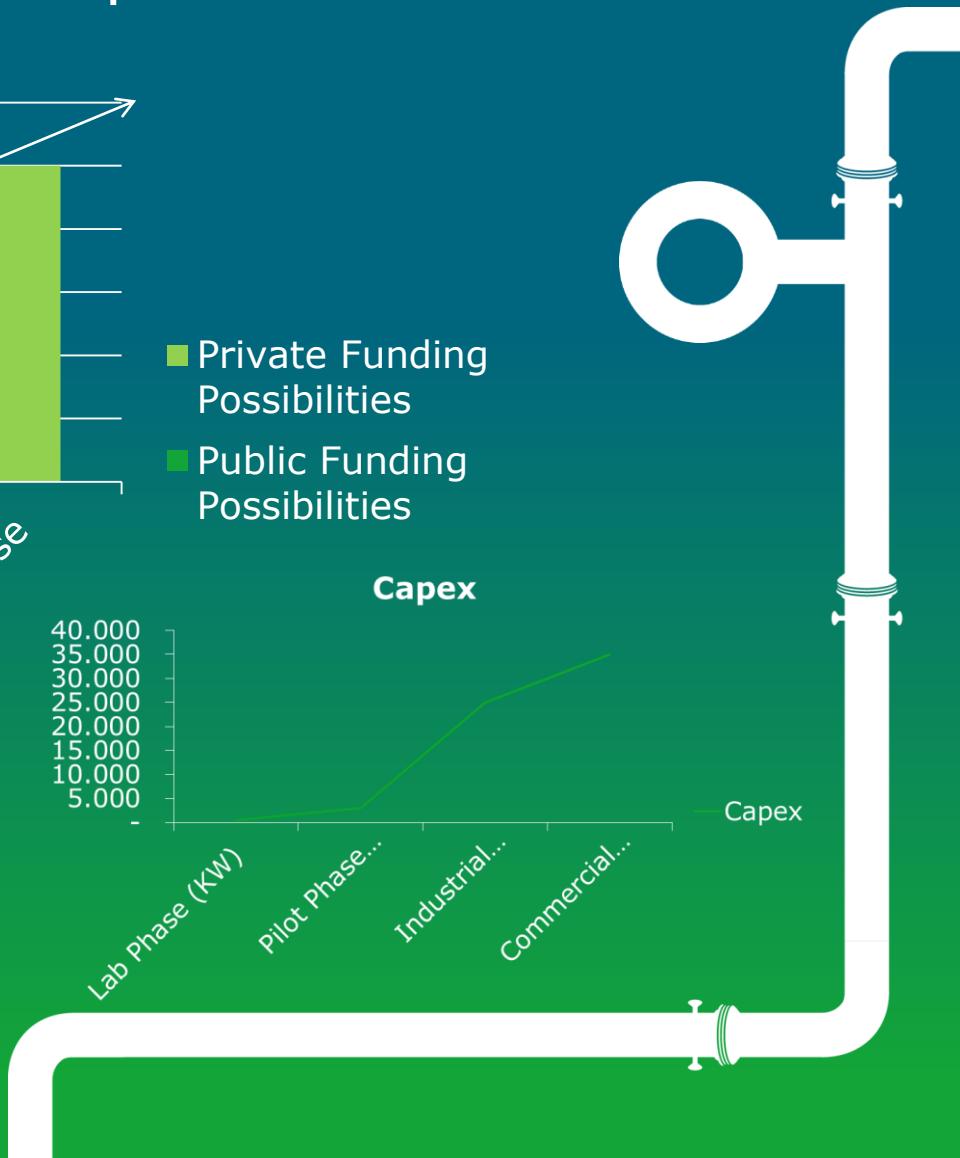
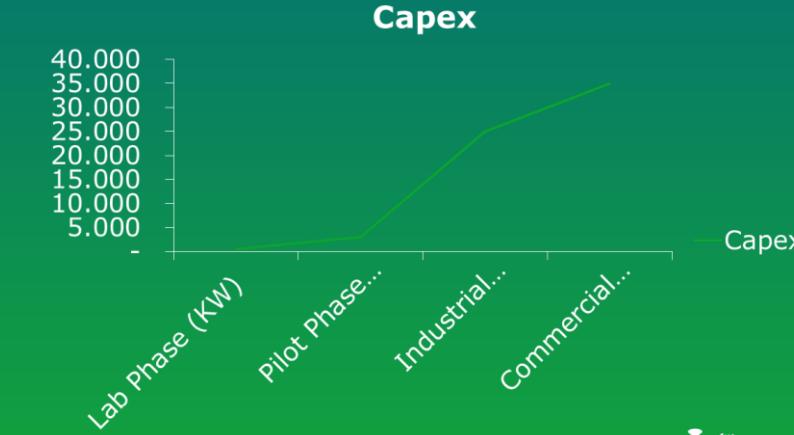
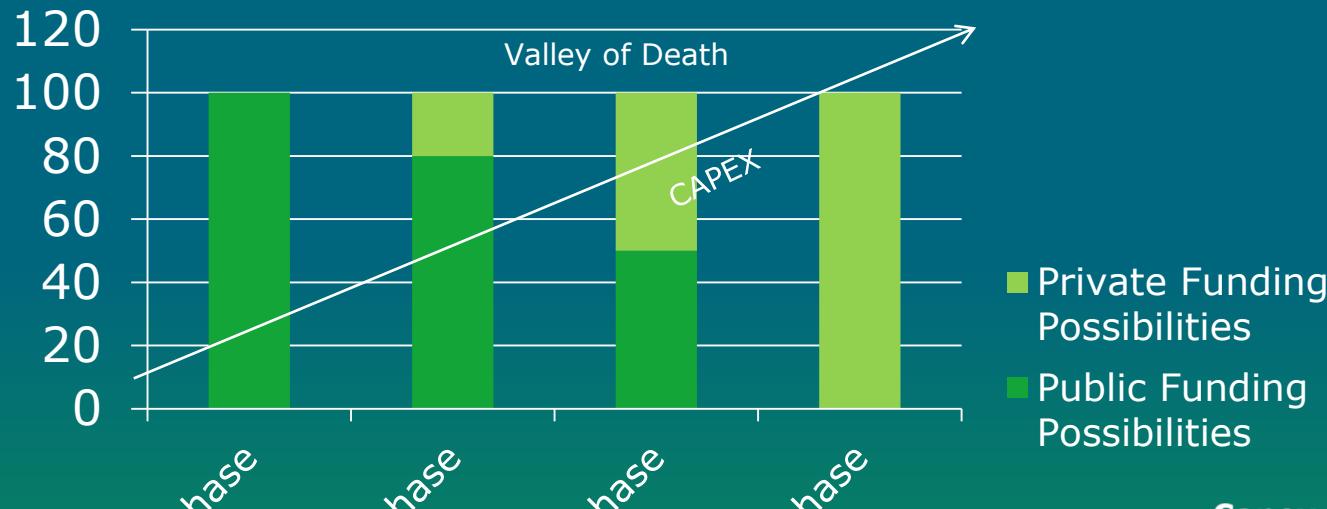


Innovation/scaling up is crucial

- Need to make gasification technology “bankable” (TRL 9)
- Current projects: TRL 5-8
- **Upscaling and successful projects are necessary**
- **Financing is key**



Financing: public vs private capital



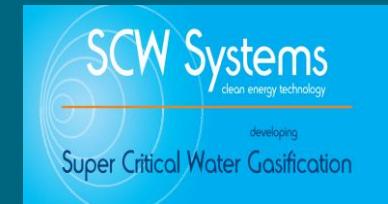
Developments in the Netherlands: Ambigo

4 MW installation demonstrating the biomass to SNG process in Alkmaar is planned to be constructed in 2017



Developments in the Netherlands: SCW Systems

2 MW installation demonstrating the wet biomass to SNG process in Alkmaar is planned to be constructed in 2017, scale up to 20 MW after successful demonstration



Developments in the Netherlands: Torrgas

0,7 MW demo installation is now being tested. 10 MW plant in Delfzijl is planned for construction in 2018.

torrgas



Synthesis gas
 $\text{CO} + \text{H}_2$
(syngas)



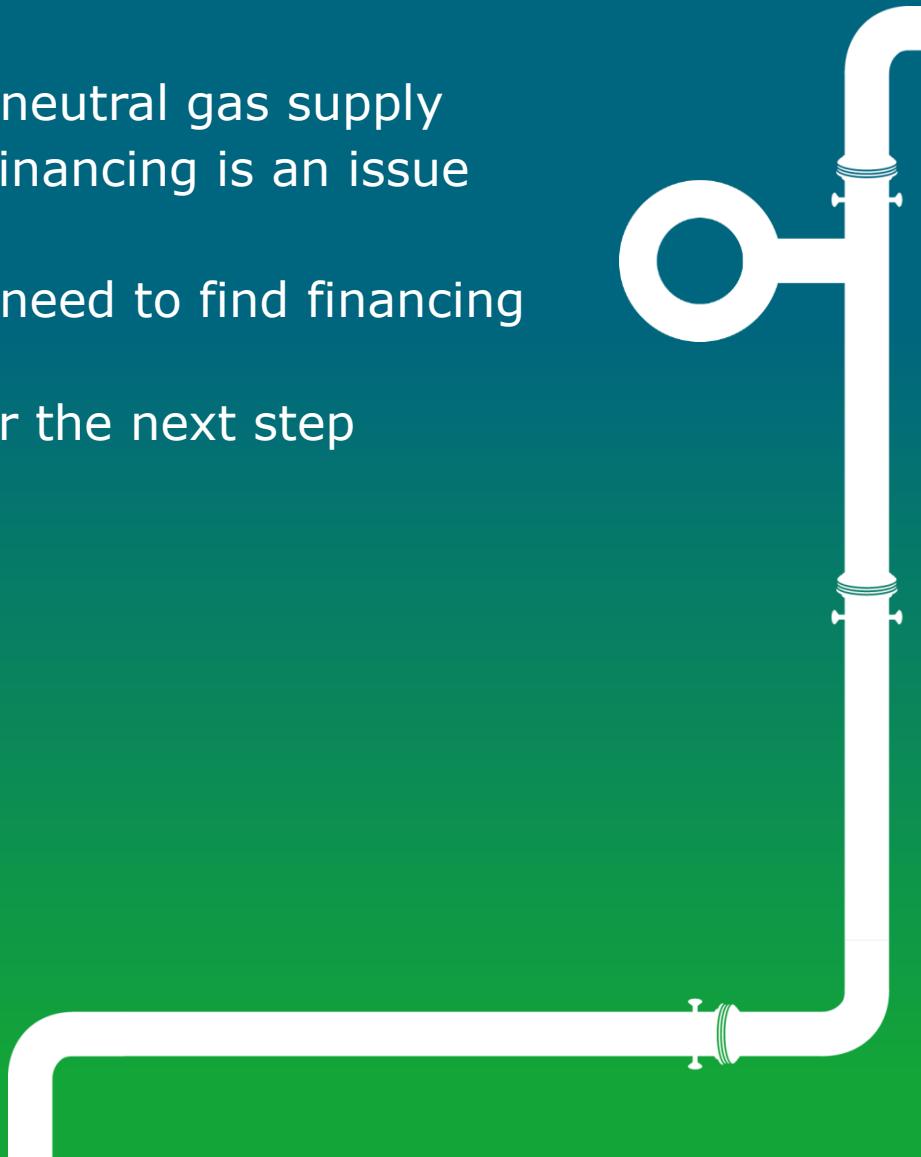
Developments in the Netherlands: Investa

Expertise Centre for Thermochemical Conversion of Biomass in Alkmaar, the Netherlands. Currently in development. Ambigo and SCW will be the first users.



Concluding remarks

- Gasification is necessary in a CO neutral gas supply
- Scaling up/innovation is crucial, financing is an issue
- Be aware of the valley of death
- Private parties and governments need to find financing models for the pre market phase
- The Netherlands are preparing for the next step
- **Time to act!**





Thanks for your attention