



## 35 BCM BIOMETHANE FOR EUROPE: INNOVATION POTENTIAL

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EC Innovation Fund workshop | 28 June 2022

# REPOWER EU FOR A RESILIENT & INDEPENDENT ENERGY SYSTEM: INCLUDING BIOMETHANE



First step: Gas for Energy Security

- Import of LNG/CNG from non-Russian origin
- Import and promotion of biomethane and RFNBO
- renewable hydrogen to decarbonise the industry
- **significant increase of biomethane production: ~ 35 bcm until 2030**
  - old target: 17 bcm
  - production 2021: 3 bcm



# LET'S DO IT RIGHT: NEW PRODUCTION MUST COMBINE BEST AVAILABLE TECHNOLOGIES



## AVOID ANY METHANE EMISSIONS

- covered digestate storage & exhaust gas treatment
- constant monitoring & measuring



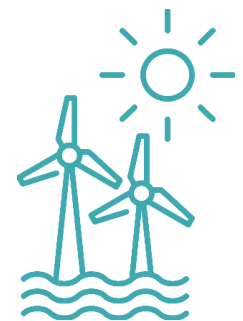
## DECENTRAL ELECTRICITY PRODUCTION AS REDUNDANCY

- upgrading & feed-in have non-availability of min. 5%
- alternative use of gas always needed: gas engines as preferred option
- 35 bcm biomethane sites can add 20 GW decentral electricity production capacity



## RENEWABLE ENERGY INPUT

- up to 6% energy self-consumption to generate biomethane
- power-to-heat approach can help to utilize excess electricity
- integration of local renewable sources



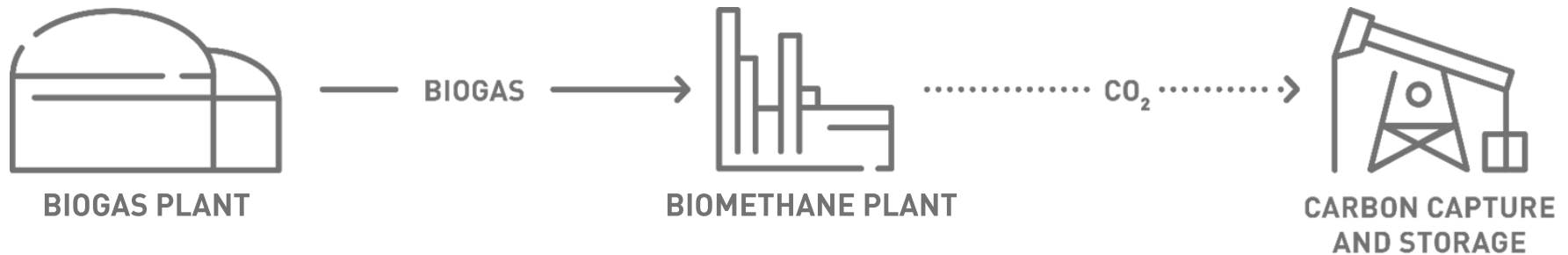
# CCS AT BIOMETHANE PLANTS IS AN EFFECTIVE WAY TO DECARBONIZE THE ATMOSPHERE



## CARBON CAPTURE & STORAGE

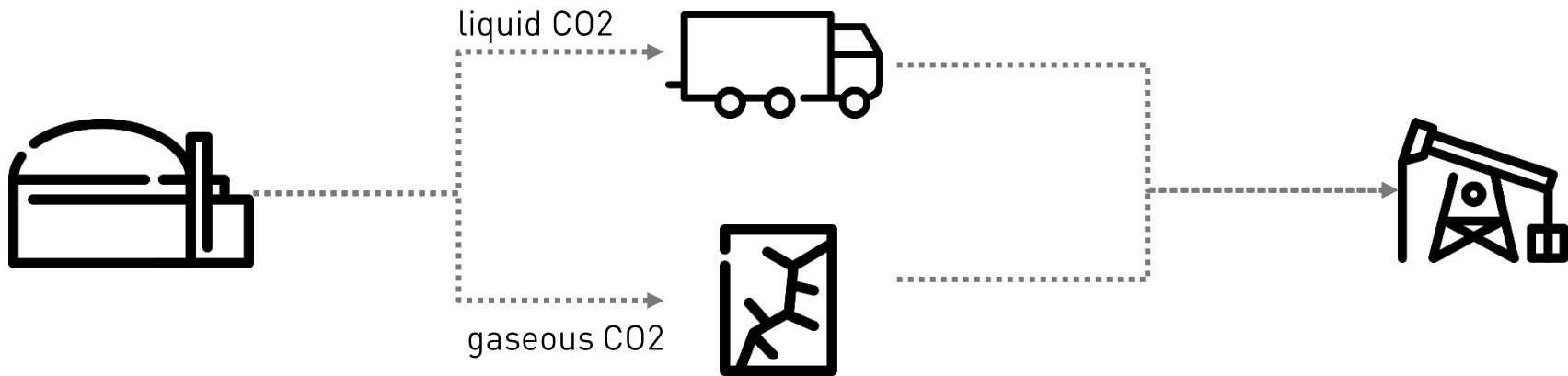
is already part of  
biomethane production

final **carbon storage**  
(e.g. empty gas fields)



35 bcm biomethane production can generate 55 Mt/a of true negative emissions

# CO2 LOGISTICS IS THE CHALLENGE TO HARVEST THE CCS POTENTIAL OF 35 BCM BIOMETHANE



5.000-10.000  
decentral biomethane  
plants needed to  
reach REPower target

liquified CO2 for  
collection and short  
distance  
transportation

gaseous CO2  
transport over long  
distance via dedicated  
grid infrastructure

final storage mainly in  
former off-shore  
gas fields





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