



WORLD BIOGAS
ASSOCIATION

BIOENERGY WORKSHOP 2021

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13 July 2021

WHO ARE WE?



- Founded in 2016 by national associations from the UK, USA and Italy and 20 founding company members
- Now represent ~ 100 organisations from around the world, including national associations from Latin America, Asia, Africa and Europe
- Observer with UNFCCC, member of CTCN, CCAC, GMI, and a partner of C40 Cities Network
- Cooperating with FAO, EU, UNEP, IEA among others



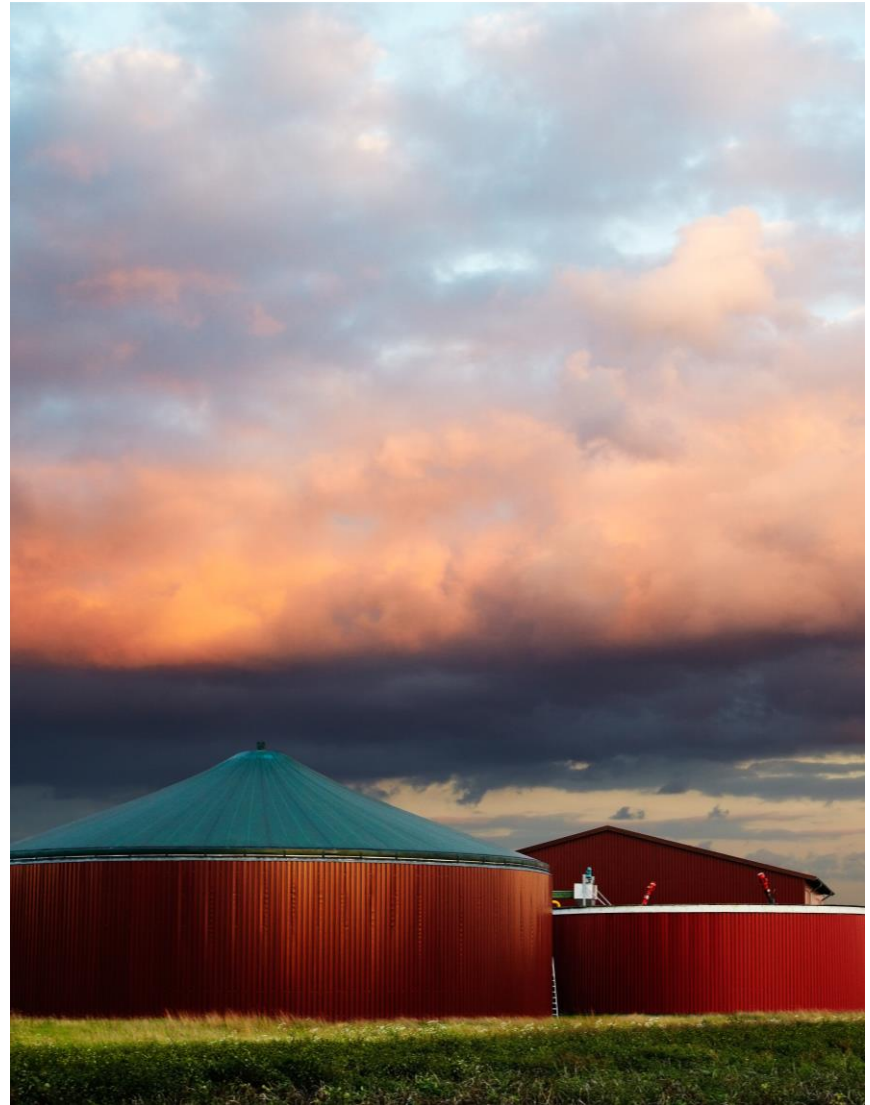
BIOGAS/AD: A WASTE MANAGEMENT SOLUTION



- ✓ Over 105 billion tonnes of organic wastes globally
- ✓ If not recycled, these emit methane and other GHG emissions
- ✓ Anaerobic Digestion (AD) recycles them into biogas, bio-CO₂, natural fertilisers, and other valuable bio-products
- ✓ Only 2% are treated and recycled
- ✓ By recycling the readily available organic wastes, we can cut global GHG emissions by 10% by 2030

WHERE IS THE INDUSTRY NOW?

- ✓ 50 million micro-digesters
- ✓ > 132,000 small, medium and large-scale digesters
- ✓ > 700 upgrading plants
- ✓ 87.5 TWh electricity generated (2016)
- ✓ Employing > 344,000 people
- ✓ USA, India and China are where the largest potential lies
- ✓ Year on year growth estimated at 7% and industry's value \$110 billion by 2025



RECOMMENDATIONS FOR POLICY FRAMEWORK



- ✓ While the industry is maturing, the industry should be supported with direct government payments in the form of a tariff
- ✓ Targeted innovation funding should be directed towards increasing biogas yields
- ✓ Grant funding should be made available for the development of carbon capture, utilization and storage (CCUS) on new and existing biomethane plants
- ✓ As the biogas industry matures and innovation improves the financial model, tariff support can be replaced by market based mechanisms

- ✓ The main feedstock in Denmark is animal manure and other agricultural by-products
- ✓ The majority of biogas produced in Denmark is upgraded to biomethane injected into the national gas grid
- ✓ The Danish gas industry predicts that by 2040 the national gas grid will be 100% biomethane
- ✓ Most biogas facilities in Denmark are centralised models
- ✓ Securing feedstock from a network of farms, ranging from between 5-100 in a 10 to 25km radius of the plant
- ✓ Farmers are relieved of the cost of development and operation
- ✓ Farmers are offered the opportunity to take a stake in the facility
- ✓ Central operator undertakes all the transportation of feedstocks and distribution of digestate

- ✓ In the US, the Renewable Fuels Standard (RFS) program provides a market-based monetary value for renewable fuels
- ✓ California's Low-Carbon Fuel Standard (LCFS): The value of the LCFS credits can be monetized in California if the fuel is conveyed and used as a transportation fuel in the state
- ✓ The federal RFS and state LCFS incentives are additive
- ✓ Legislation to reduce methane emissions by 40 percent by 2030
- ✓ The California Department of Food and Agriculture (CDFA) created the Dairy Digester Research and Development Program (DDRDP)

WHAT NEEDS TO BE DONE?



- ❖ Removal of fossil fuel subsidies
- ❖ Net zero emissions targets by 2050
- ❖ Biogas targets in energy and climate plans
- ❖ Separate food waste collections for citizens
- ❖ Food waste management requirements for businesses
- ❖ Specify AD as preferred method of treatment for organic wastes
- ❖ Improved sanitation infrastructure
- ❖ Renewable energy incentives
- ❖ Enable safe trading and use of digestate
- ❖ Nutrient recovery plans for farms
- ❖ Sustainability and GHG criteria for agricultural production
- ❖ Govt. spending on biomethane infrastructure

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