

# NORSUS

Norwegian Institute for  
Sustainability Research

IEA Bioenergy task 37 Energy from biogas

## Country report for Norway 2019 (draft)

Kari-Anne Lyng  
kari-anne@norsus.no



## Some introductory comments...

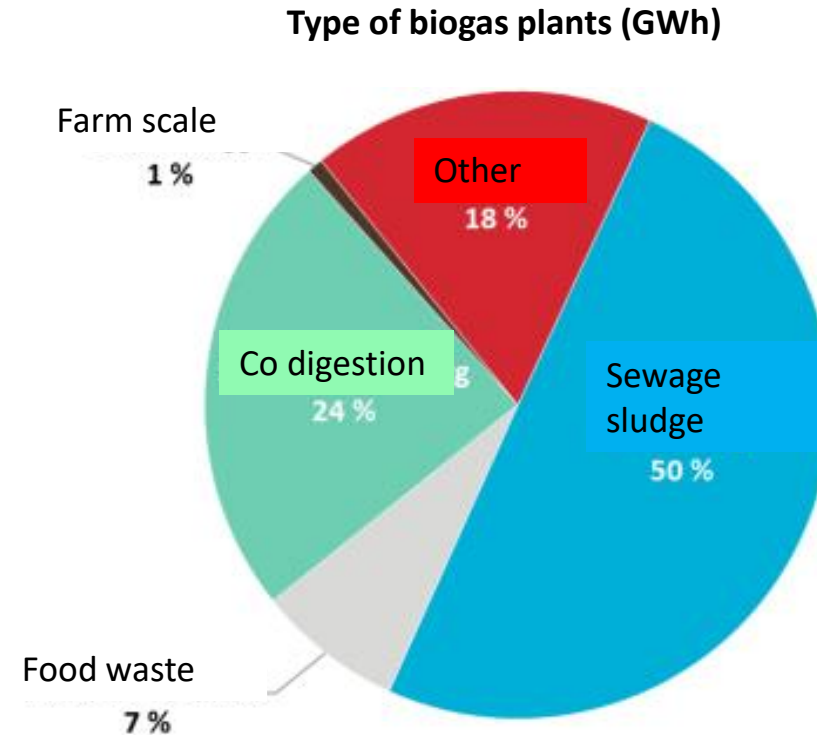
- Official biogas statistics are not easily available
- A lot of information from different sources, but on different formats (capacity, produced, supplied)
- Figures will hopefully be updated in final report

# Framework conditions for biogas in Norway

- Large share of renewable electricity (hydropower) and bioenergy in the energy mix
- Energy prices are relatively low
- Major exporter of natural gas, but domestic use is limited
- Limited gas grid infrastructure

# Feedstocks

- Mostly sewage sludge and food waste
- Manure: less than 1%



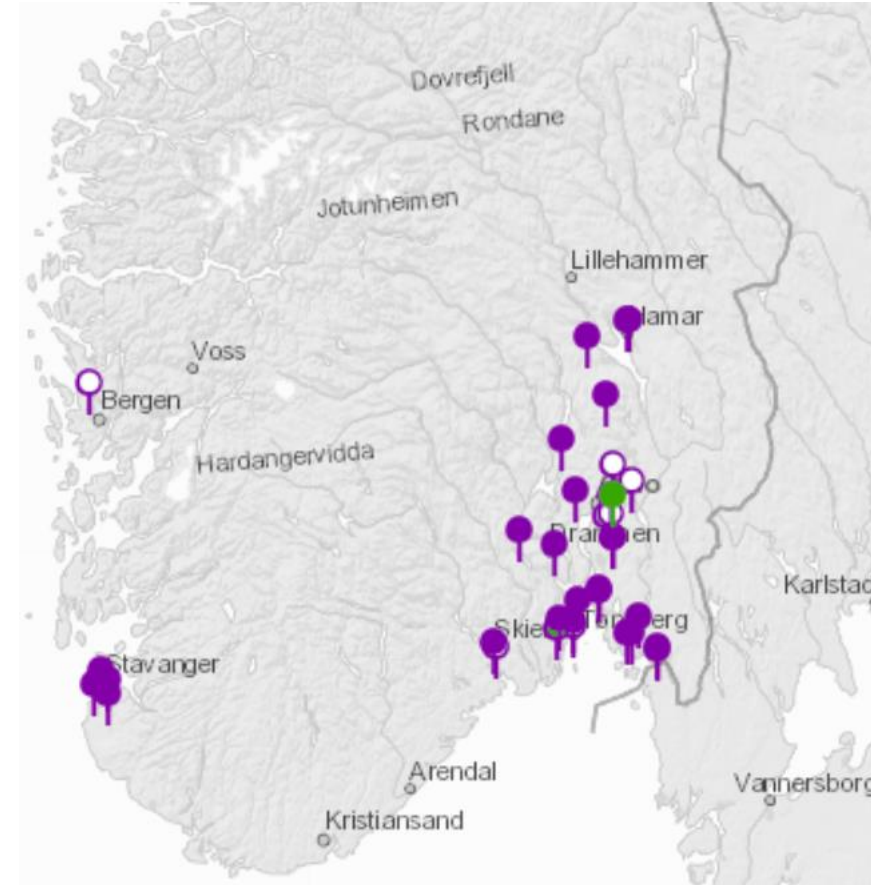
From Report: Husdyrgjødsel til biogass Gjennomgang av virkemidler for økt utnyttelse av husdyrgjødsel til biogassproduksjon  
<https://www.regjeringen.no/contentassets/6a5da53b1ba243eb86a4e2314abe96a4/husdyrgjodsel-til-biogass---gjennomgang-av-virkemidler-for-okt-utnyttelse-av-husdyrgjodsel-til-biogassproduksjon.pdf>

## Number of AD plants

- ~40 plants
- ~6 farm scale
- 13 upgrades to gas for transport
- 2 connected to a local gas grid

## Filling stations

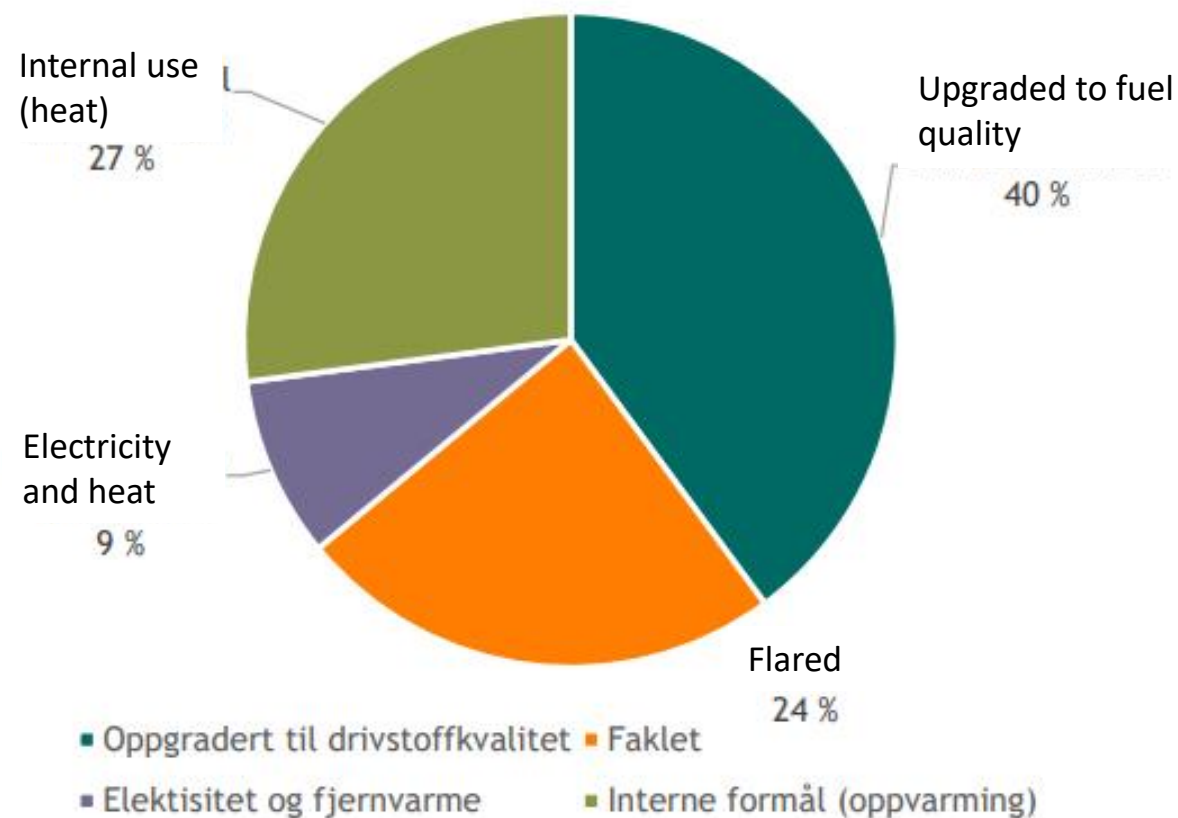
- ~30
- Mostly CBG, 2 LBG



From Biogass Oslofjord: <http://biogassoslofjord.no/fyllestasjoner-norden/>

## Use of biogas (2018)

- Upgraded for fuel for transport: 40%
- Electricity and heat: 9%
- Internal use (heat): 27%
- Flared: 24%



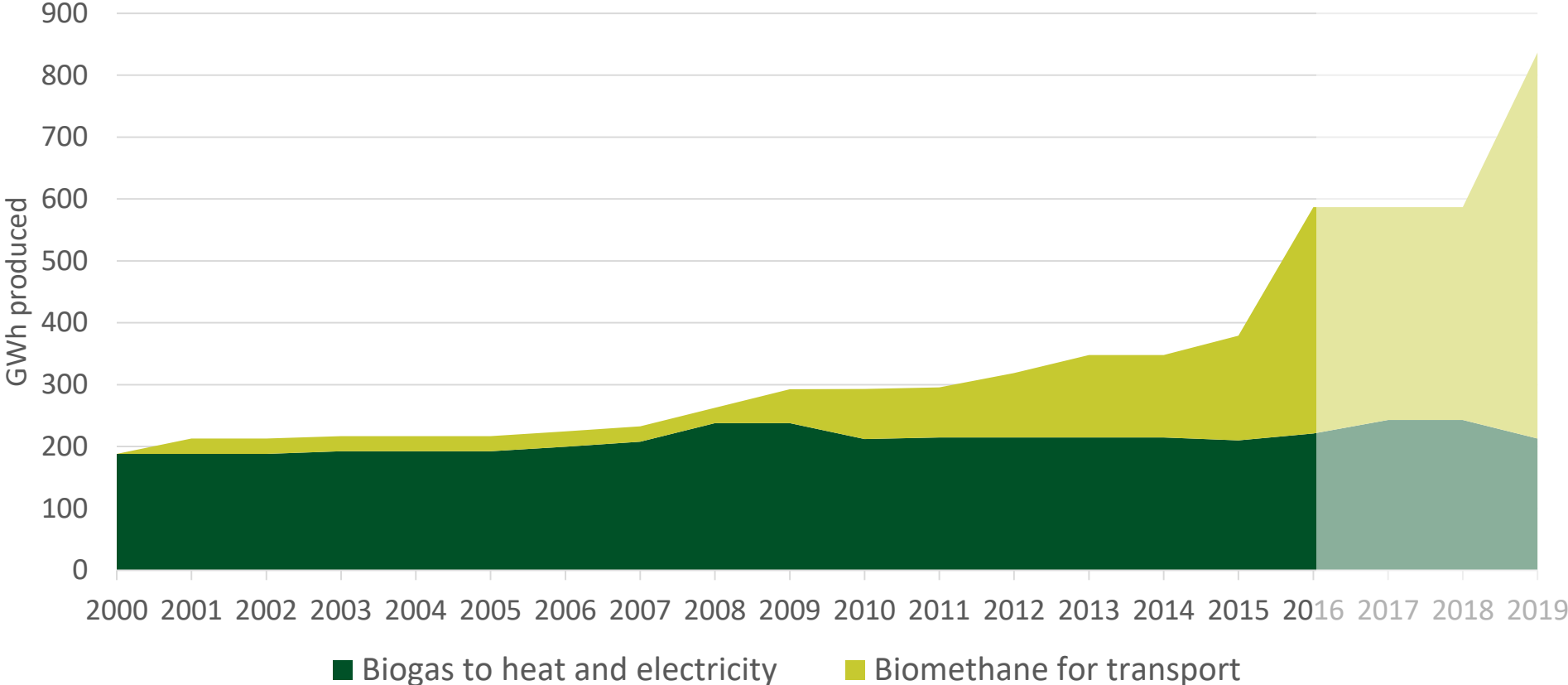
From report: Virkemidler for økt bruk og produksjon av biogass  
<https://www.miljodirektoratet.no/globalassets/publikasjoner/m1652/M1652-versjon2.pdf>

# Biogas consumed (national statistics)

	2017	2018	2019*
GWh produced	426	536	922
GWh consumed	291	401	736

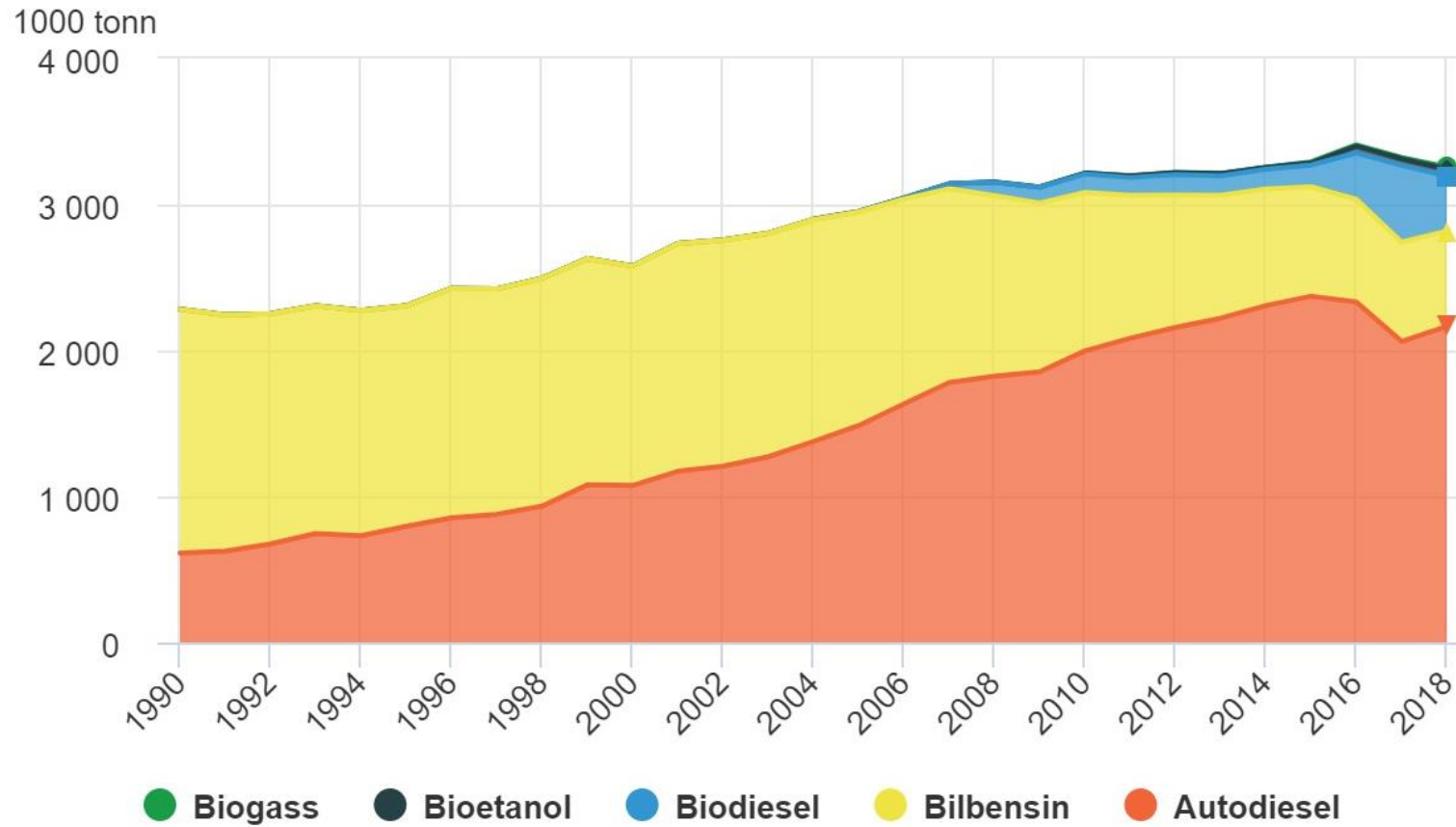
\*may be subject to updates

# Capacity - biogas production





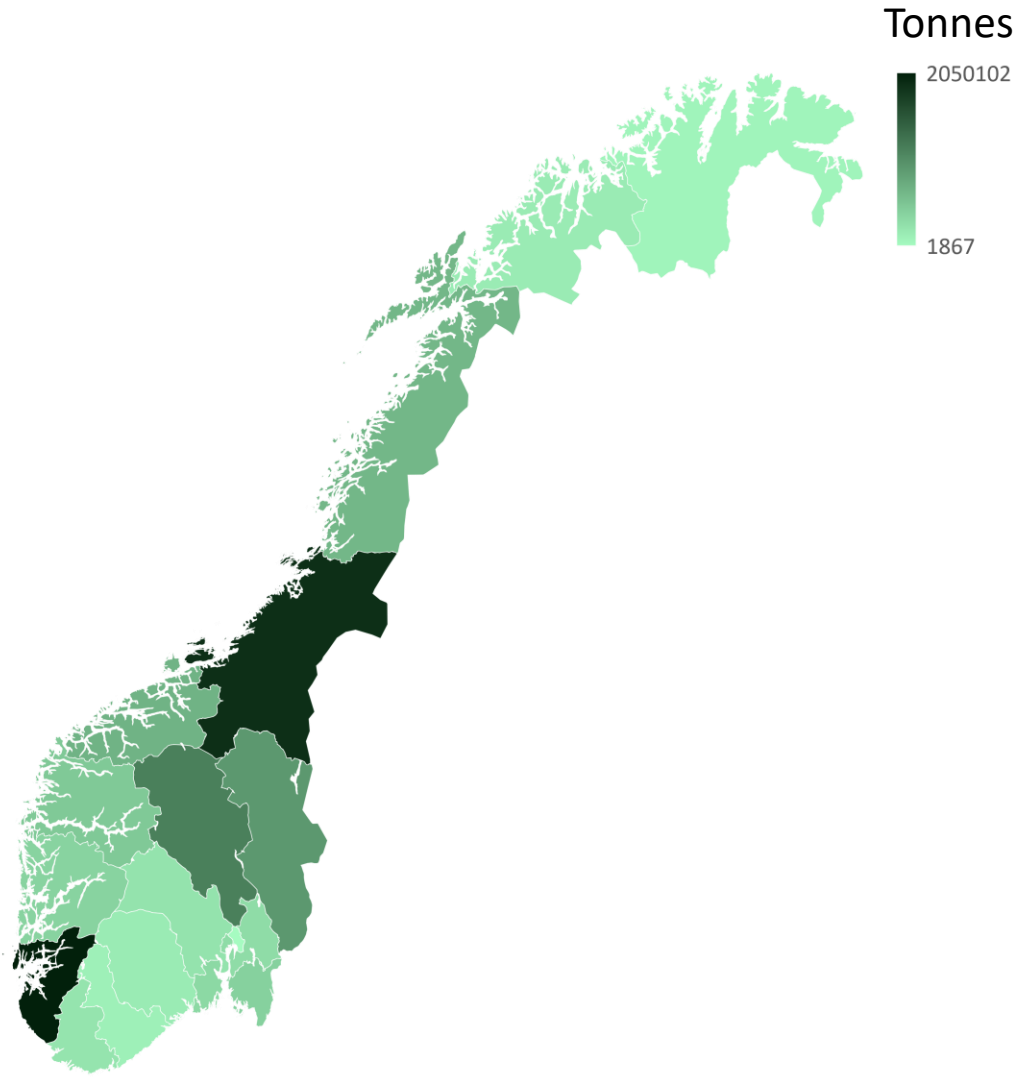
# Consumption of fuel for road transport



Kilde: Statistisk sentralbyrå.

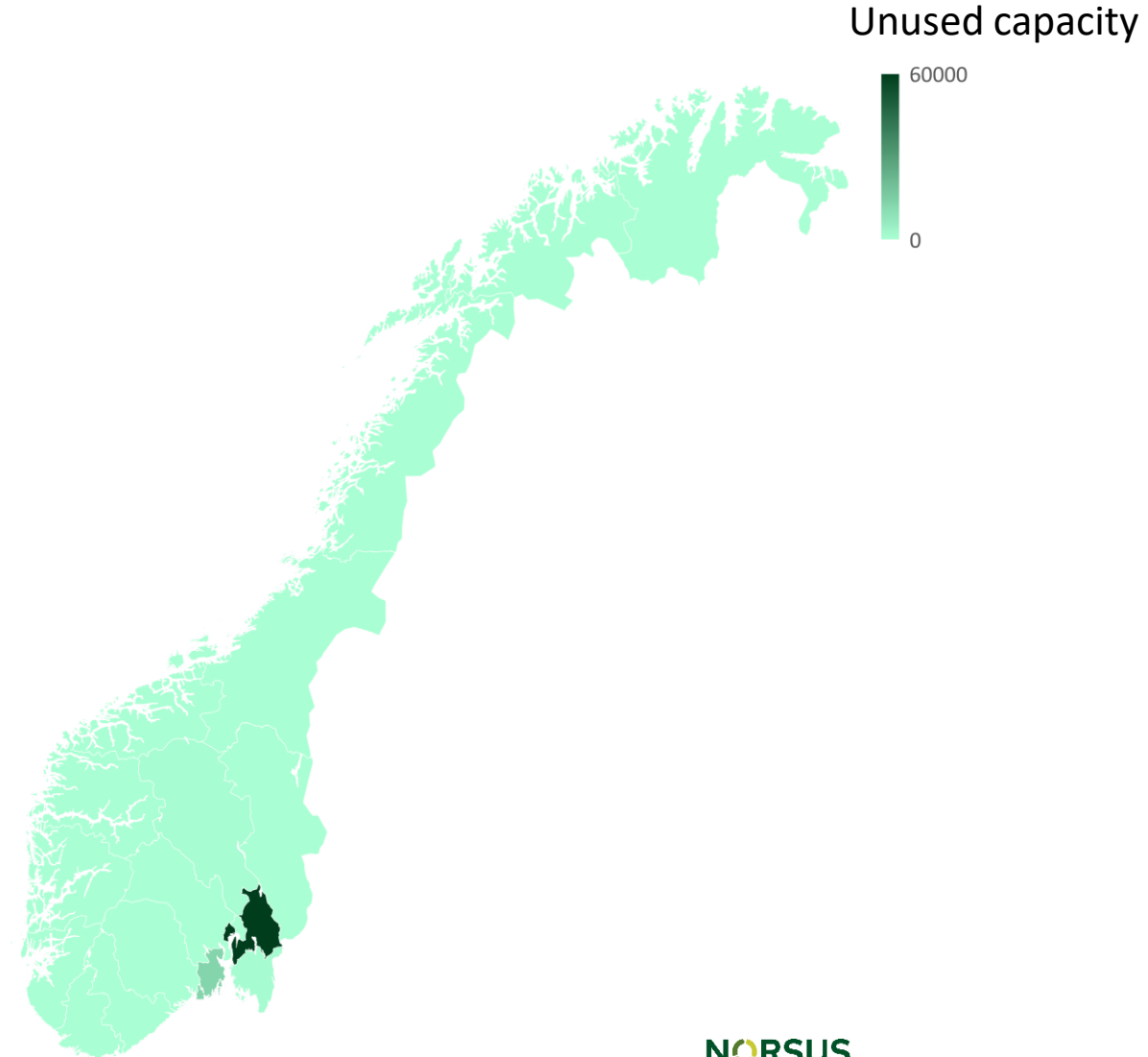
# Where are manure resources?

Amount of manure from cattle and pig



# Where is the available capacity?

Biogas plants that treats manure



# Economic incentives

- Investment support for:
  - Anaerobic digestion plants
  - Filling stations
  - Gas vehicles
- Road fee and CO<sub>2</sub> tax exempt for biogas as a fuel for transport
- Support to farmers per tonne of manure treated by AD

## Biogas in the politics

- In 2009 a white paper stated a goal of 30% of livestock manure to biogas production within 2020
- Cross sectoral biogas strategy was published in 2014
- The Norwegian Environmental Agency published a report in 2020: Political instruments for increased biogas production

## Possible future incentives

- Environmental Agency proposed a law: separation of food waste mandatory for households and industries with household-like waste (to obtain circular economy)
- Reduced toll for vehicles that run on biogas is being discussed
- Discussions about the use of the term «zero emission transport»