

# Sustainability of DHC in the Netherlands

Methodology and policy

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# Overview

- › Status of District heating in the Netherlands
- › Methodology for calculation sustainability
- › Sustainability of district heating in the Netherlands
- › Policy for sustainability of District Heating
- › Definition of efficient district heating in update EED



# District heating in the Netherlands

- › 450.000 houses connected
- › 5% of the houses
- › 13,5 PJ heat for small users (houses)
- › 13 PJ heat for commercial buildings and large users
- › 20 Large DH systems, 6 large suppliers
- › About 100 small suppliers
- › Obligation to report sustainability (kg/kWh)



# Policy

- › 500.000 additional connections to DH in 2030
- › In 2050 33% of buildings connected to DH
- › New heat law:
  - Public ownership of DH
  - Cost-plus method for the tariff
  - Sustainability criteria in kg/kWh (decreasing)
- › Subsidy for connecting existing houses to DH
- › Phase out biomass for DH

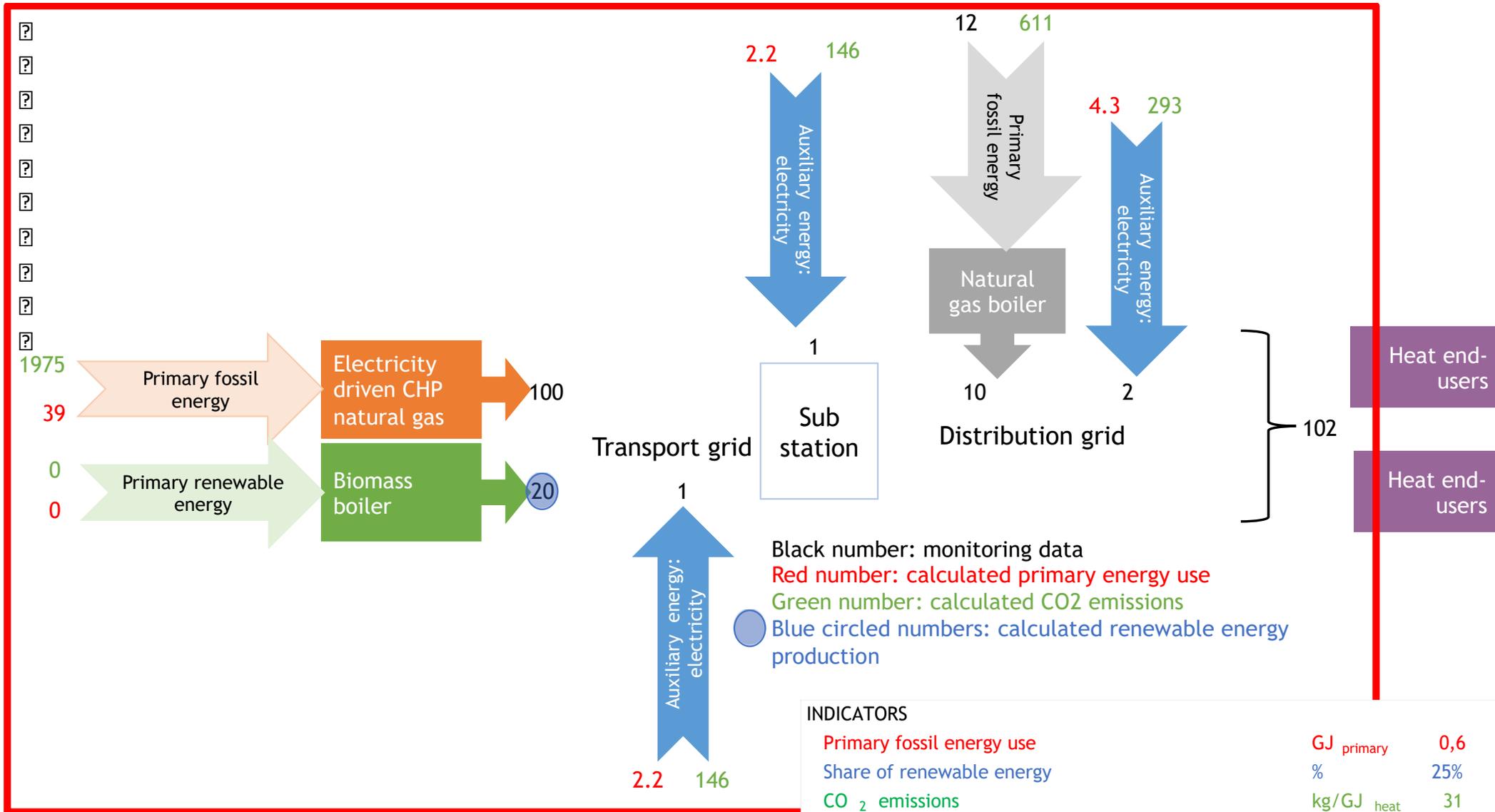


# Reporting sustainability

- › Reporting: Mandatory indicators
  - CO<sub>2</sub> emissions (kg) per unit of delivered heat,
  - Primary fossil energy use (GJp) per unit of delivered heat,
  - Share of renewable heat (%)
- › Furthermore obligatory reporting on:
  - Type and number of customers
  - Auxiliary energy (pumps)
  - Heat produced and supplied by source
  - Heat losses.

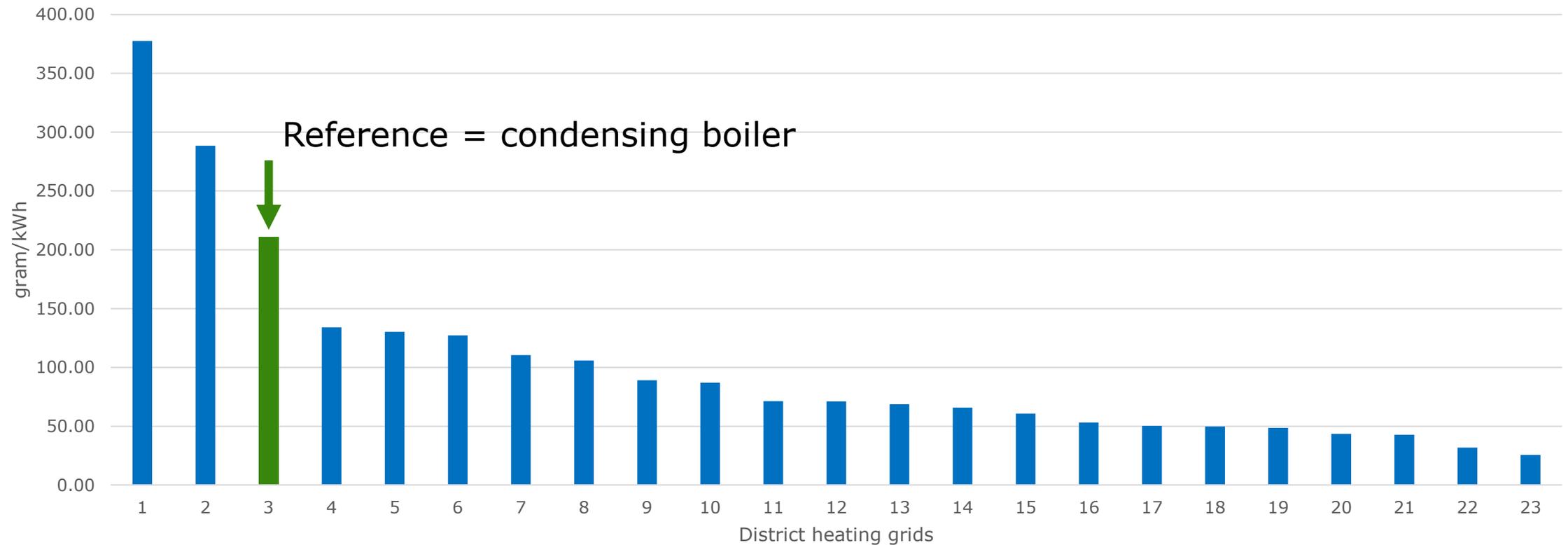


# Example





# Overview current situation (2021)

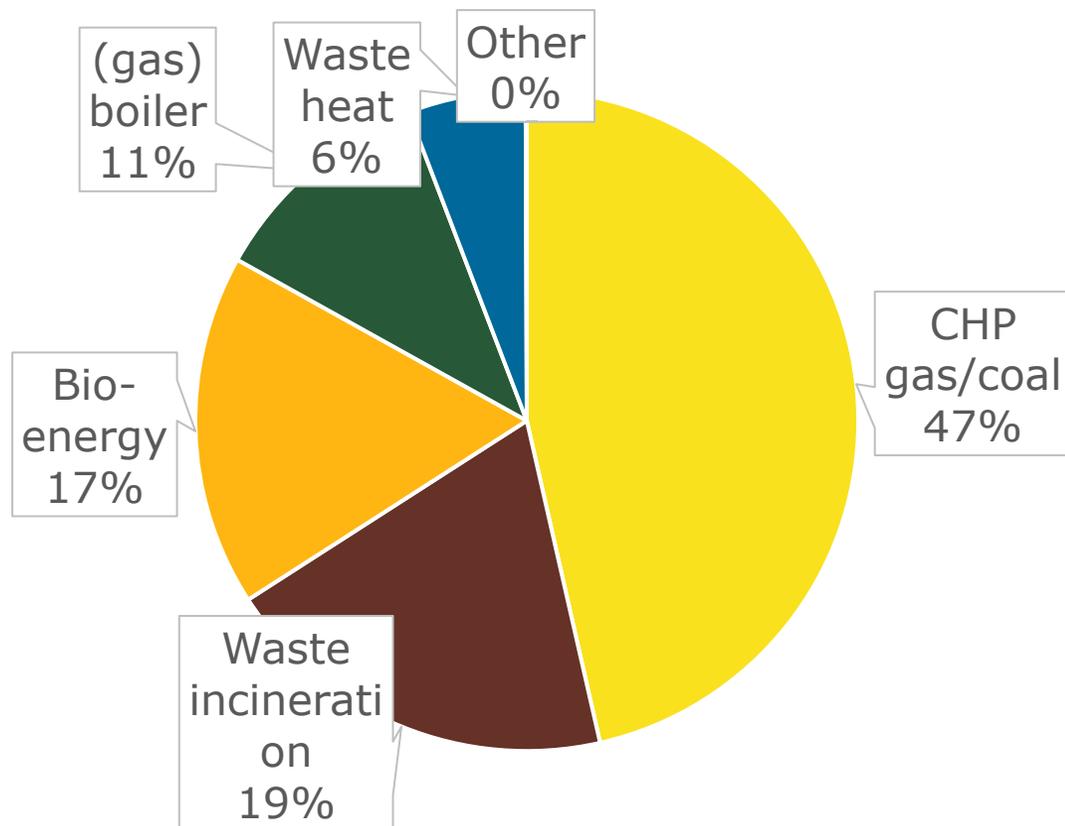


See overview at [expertisecentrumwarmte](https://www.expertisecentrumwarmte.nl)  
Method at [www.rvo.nl/warmtewet](https://www.rvo.nl/warmtewet)



# Sources for DH

**In 2021**



## **Future sources:**

- > Geothermal
- > Waste heat
- > Heat pumps
  - Surface water
  - Groundsource
  - Ambient air
- > E-boilers



# Definition efficient district heating in the EED

- › Proposed alternative definition for efficient district heating
- › EED article 24
- › Until 31 December 2025: 200 grams/kWh
- › From 1 January 2026: 150 grams/kWh
- › From 1 January 2035: 100 grams/kWh
- › From 1 January 2045: 50 grams/kWh
- › From 1 January 2050: 0 grams/kWh
- › Losses are included



# Conclusions

- › Current systems save 50% on greenhouse gas emission
- › New systems should be renewable
- › Proposed policy for obligation for sustainability
- › Proposed definition efficient DH includes distribution losses and is not depending on the type of source
- › Big challenge to reach 2050 goals