

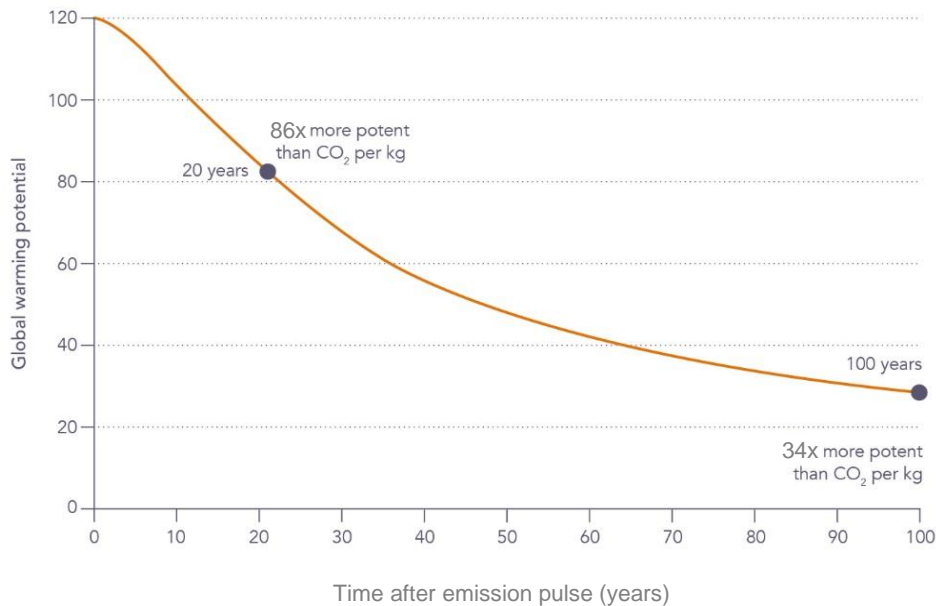
Methane Emissions from the Energy Sector

Towards a European Methane Strategy
Brussels
March 2018

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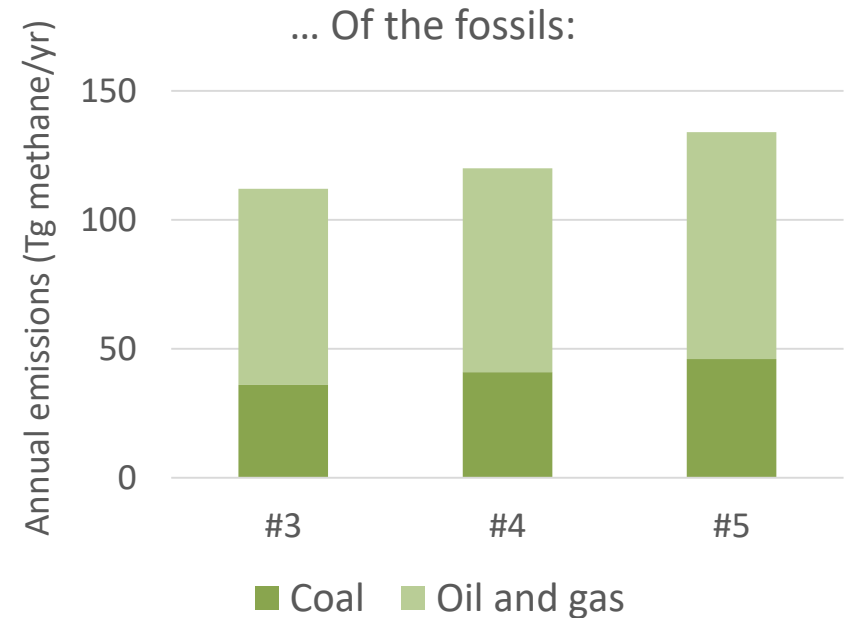
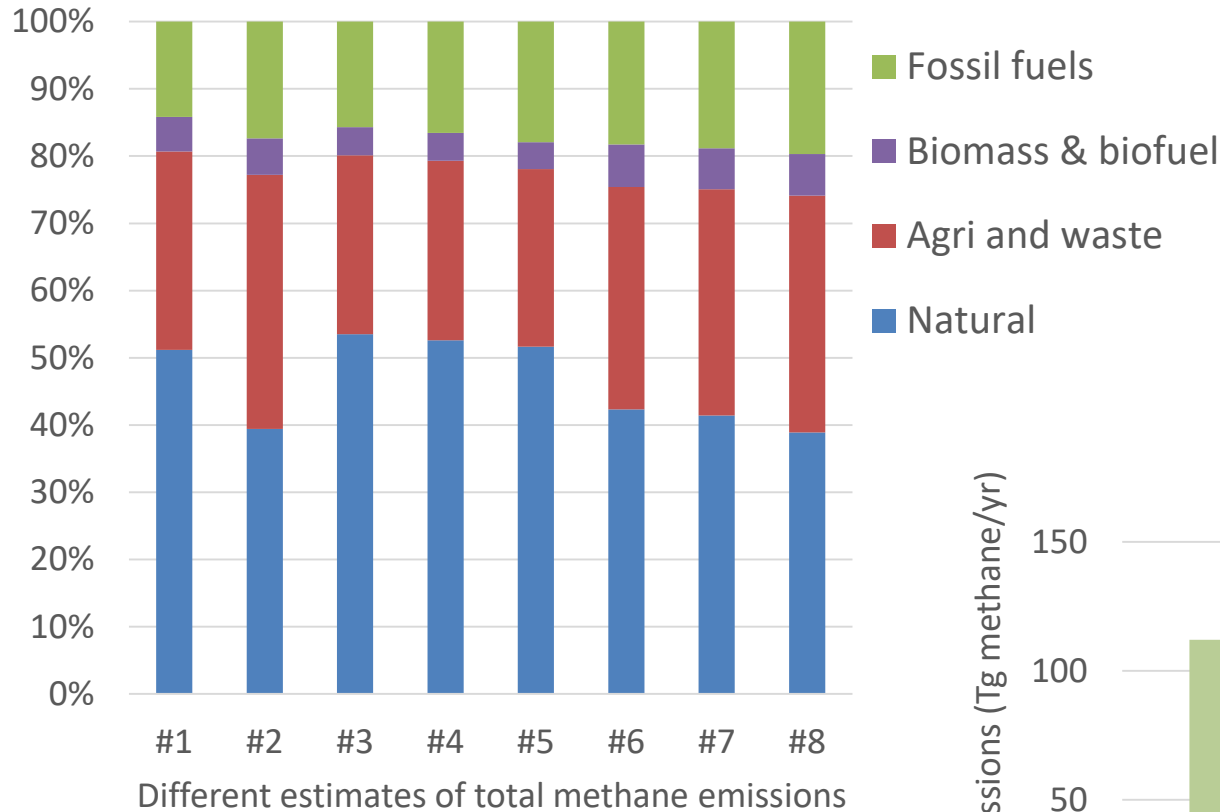
METHANE AND THE CLIMATE

Metric	Methane	Carbon dioxide
Atmospheric lifespan	12 years	100s years
Instantaneous climate forcing	120	1
Global Warming Potential (GWP 20 years)	86	1
Global Warming Potential (GWP 100 years)	34	1
Global Temperature Change Potential (GTP 20 years)	67	1
Global Temperature Change Potential (GTP 100 years)	4	1

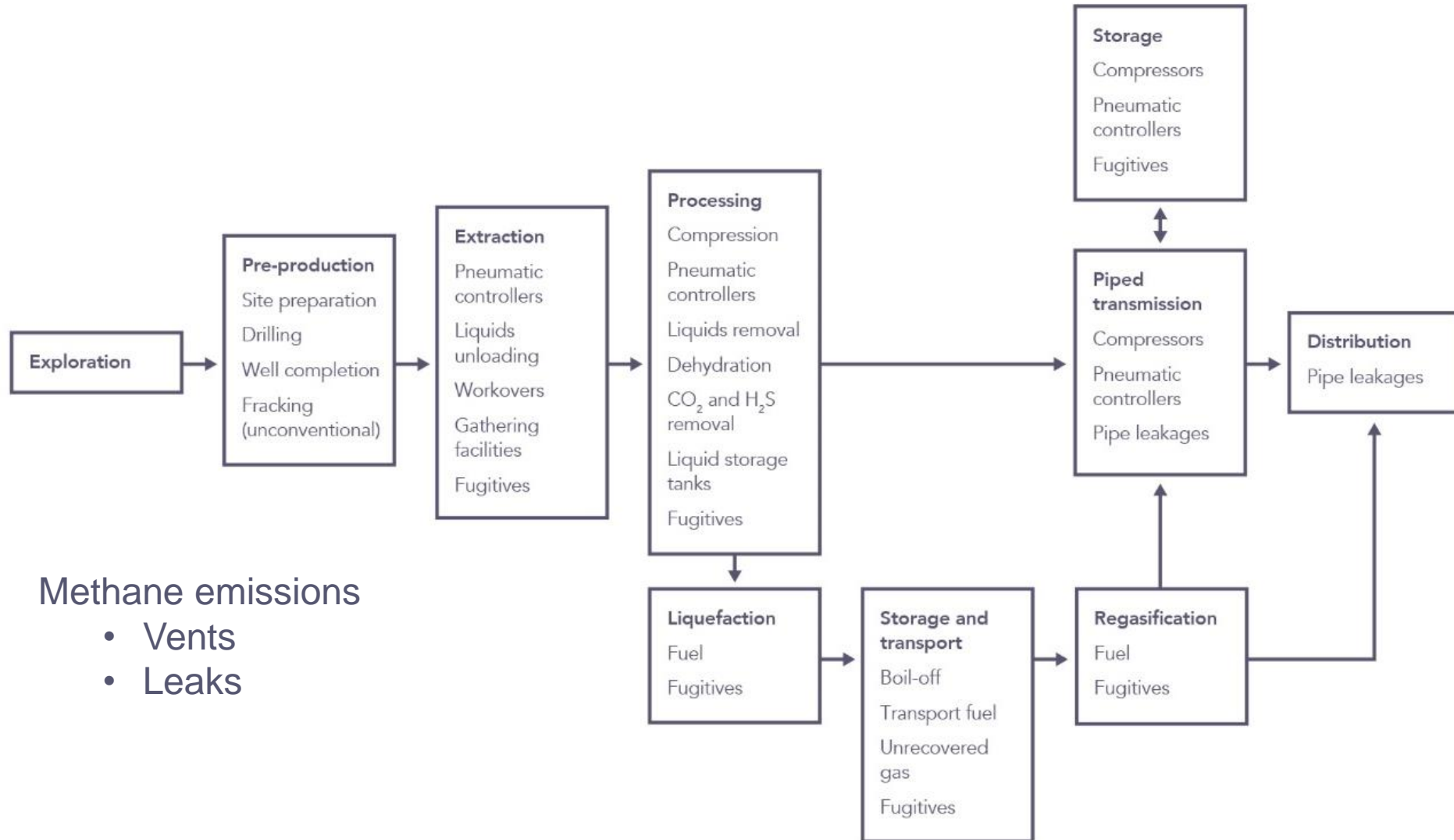


Small release of methane = large impact (at least in the short term)

SOURCES OF METHANE EMISSIONS



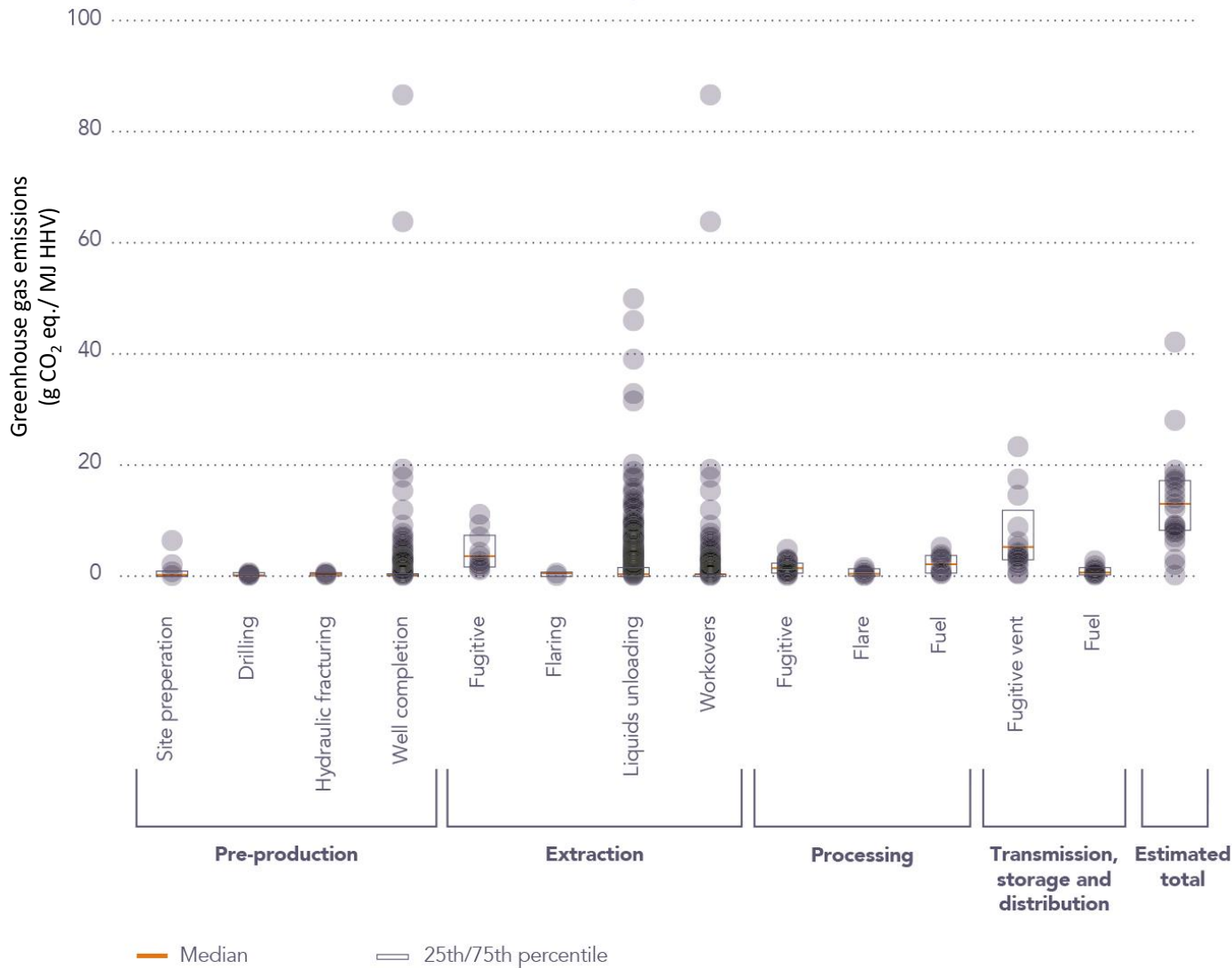
NATURAL GAS SUPPLY CHAIN



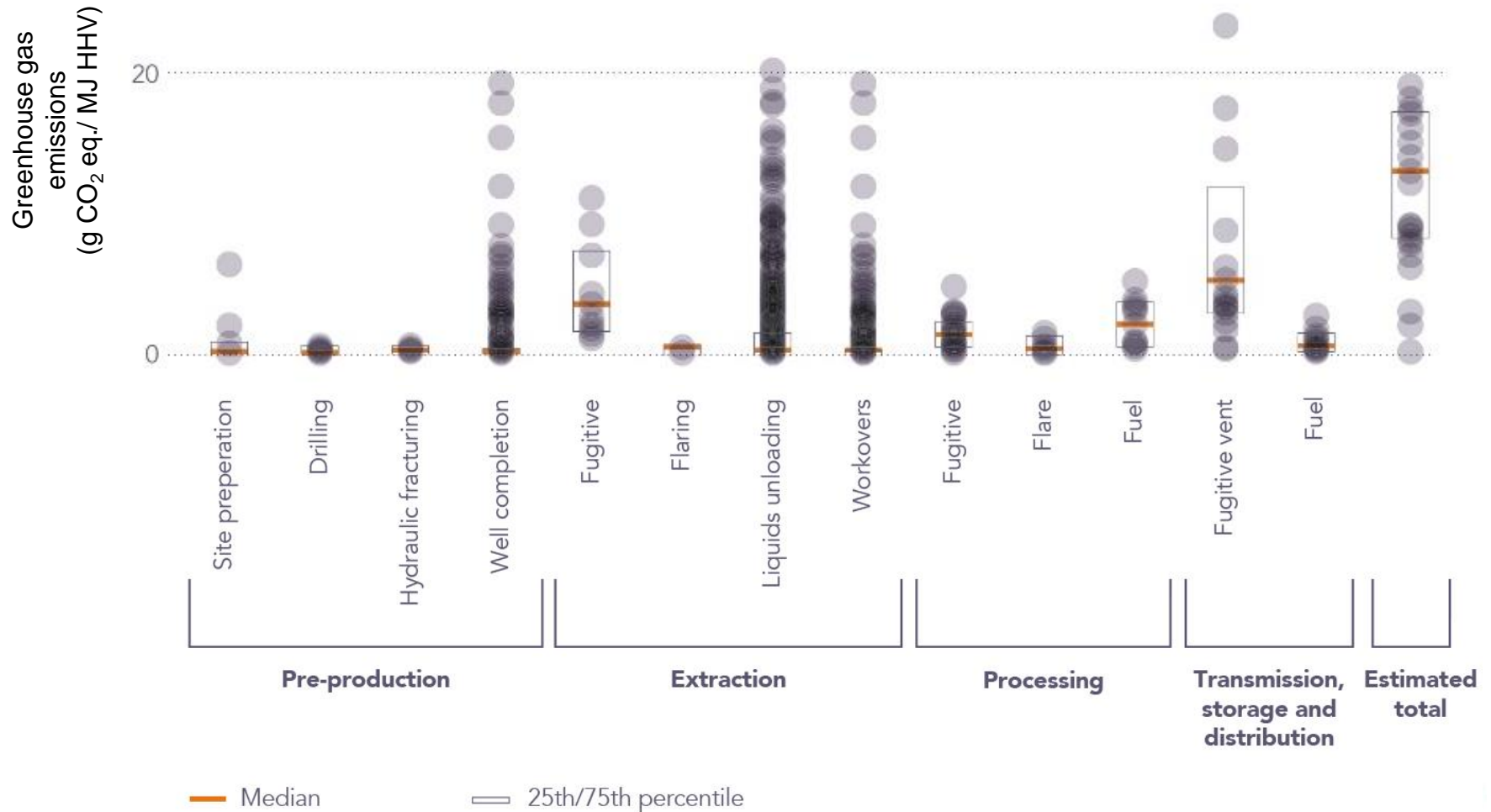
Methane emissions

- Vents
- Leaks

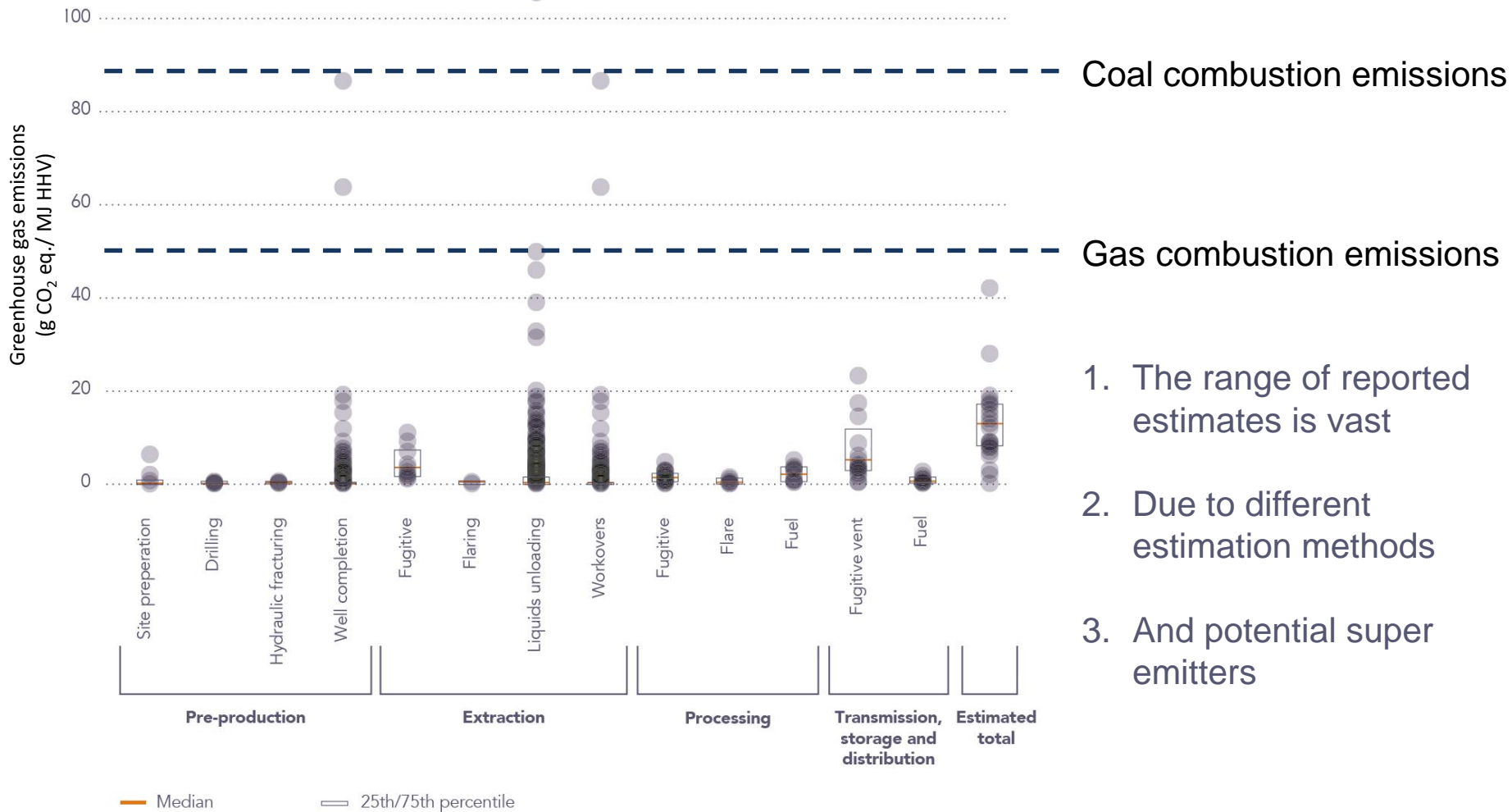
OVERALL GHG EMISSIONS



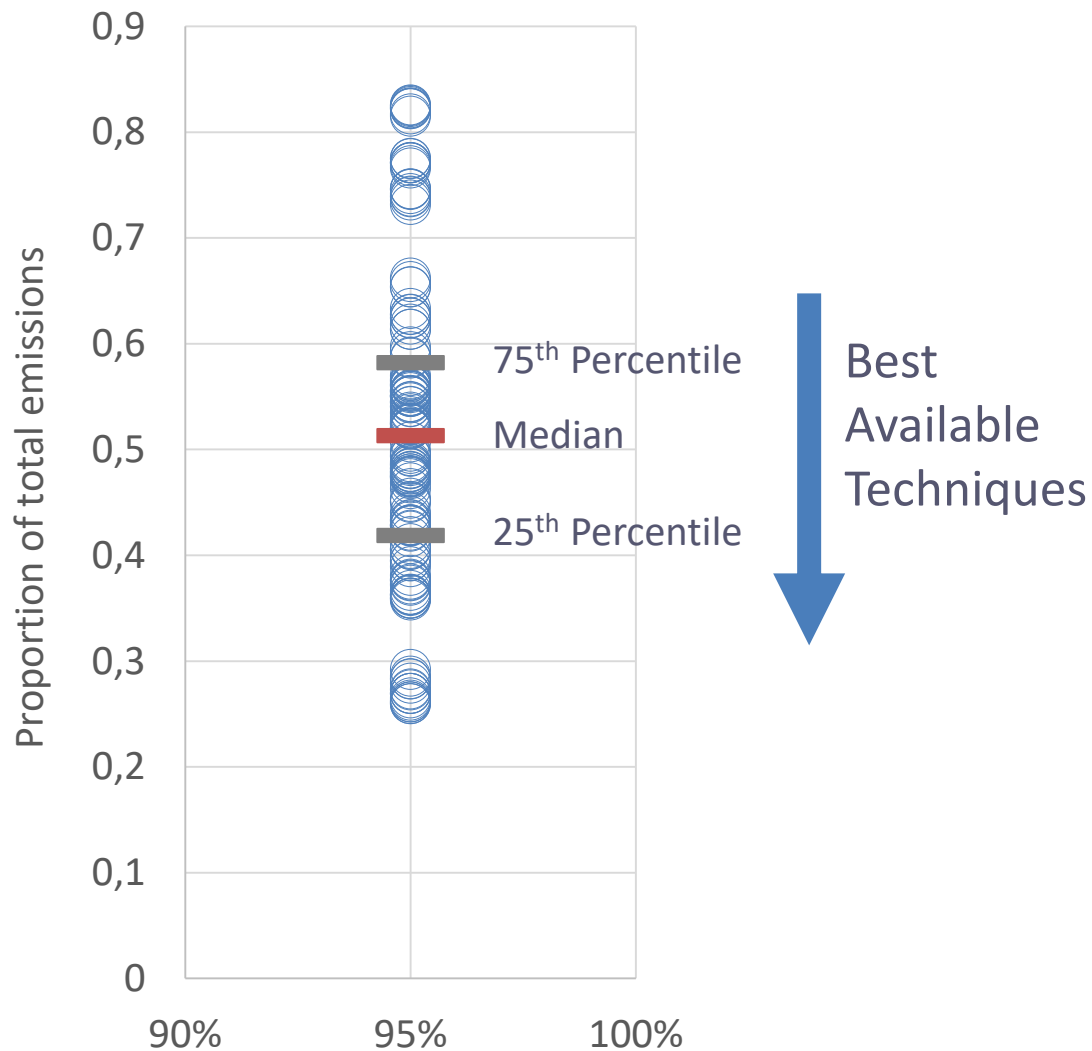
OVERALL GHG EMISSIONS



OVERALL GHG EMISSIONS



SUPER EMITTERS



- Installing effective equipment reduces the heavy tail distribution
- But it doesn't eliminate it
- More effective operation and maintenance required to reduce super emitters further

CONCLUSIONS

1. The majority of supply chain facilities/routes exhibit low emissions
 - Median supply chain emissions typically $\sim 0.8 - 1.6\%$
2. But extremely skewed distribution
 - Top 5% contribute approximately 50% of total emissions
3. Using BAT will help reduce emissions but this is not everything
 - Effective detection and remediation of fugitive methane emissions is vital
4. Industry estimation methods and reporting of methane emissions is varied and not always robust