



Reducing methane emissions in the energy sector

**Methane emissions mitigation along
the gas value chain – The road
ahead for a sustainable future**

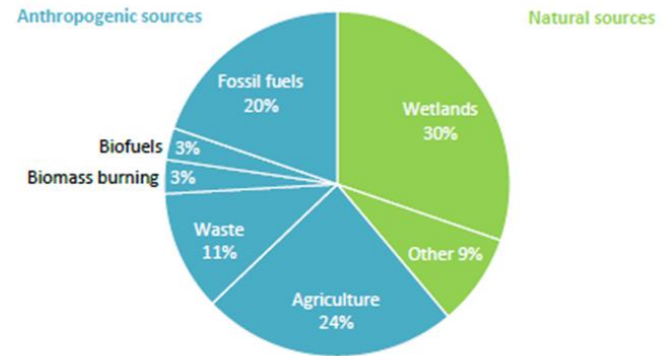
Brussels, 5 November 2019

Mónika Zsigri

European Commission, Energy

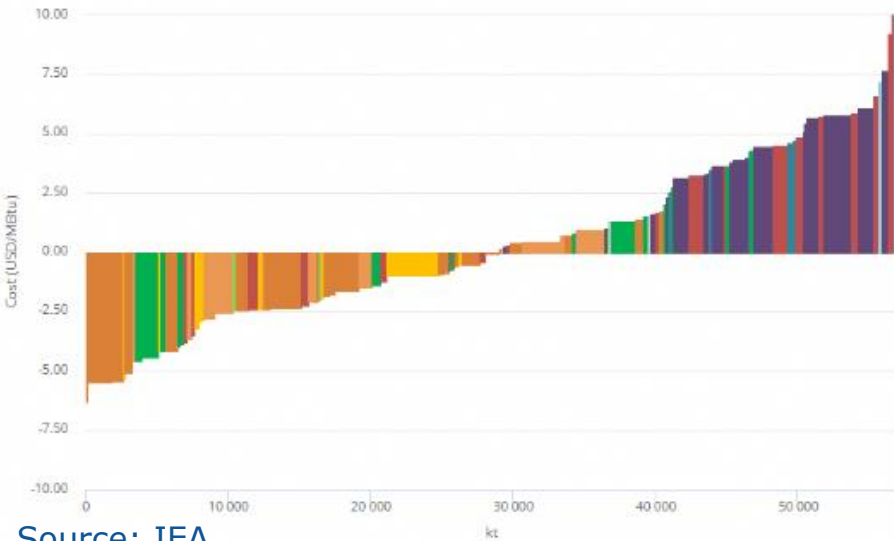
Methane is responsible for a quarter of today's warming

A third of manmade methane emissions comes from energy...



Attributing methane emissions to specific sources is difficult, but human activity is likely to be responsible for the majority of the 570 Mt emissions in 2012

Source: Saunio et al. (2016).



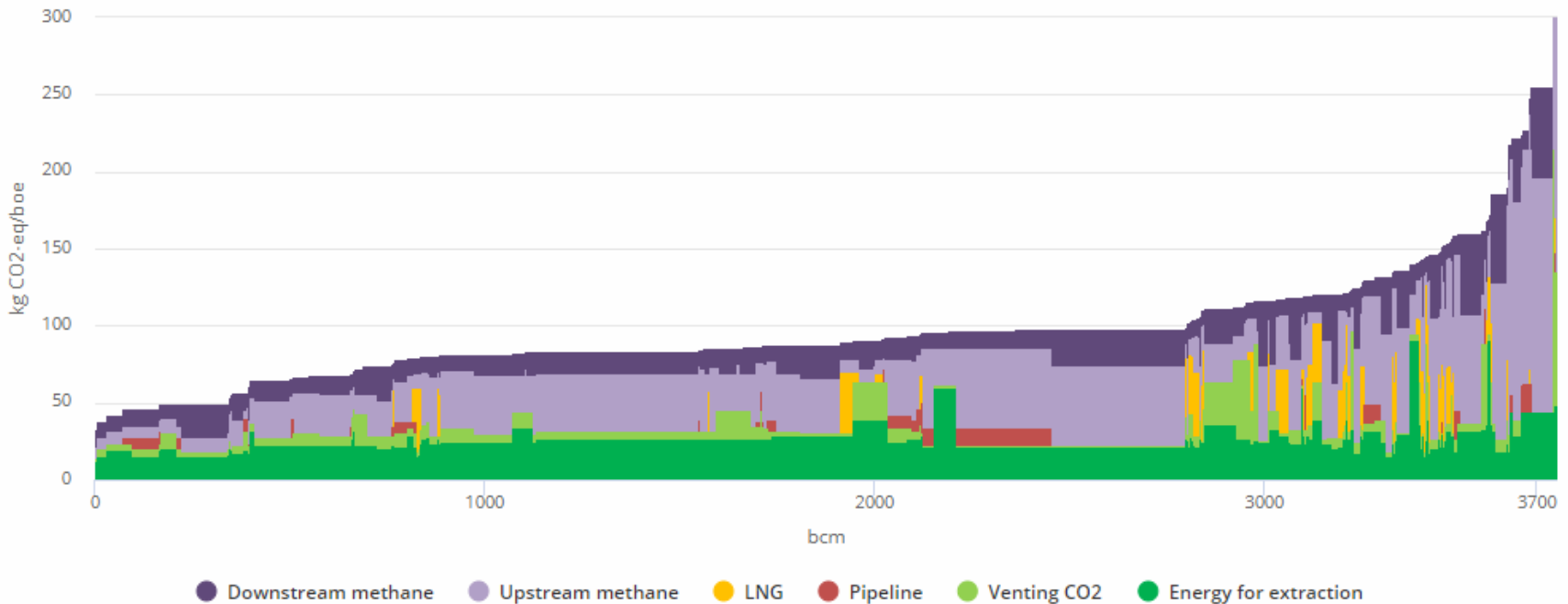
Abatement technologies

- Vapour recovery units
- Blowdown capture
- Early replacement of devices
- Install flares
- Replace with electric motor
- Install plunger
- Upstream LDAR
- Downstream LDAR
- Replace pumps
- Replace with instrument air systems
- Replace compressor seal or rod
- Other

...45% of which can be avoided at no net cost

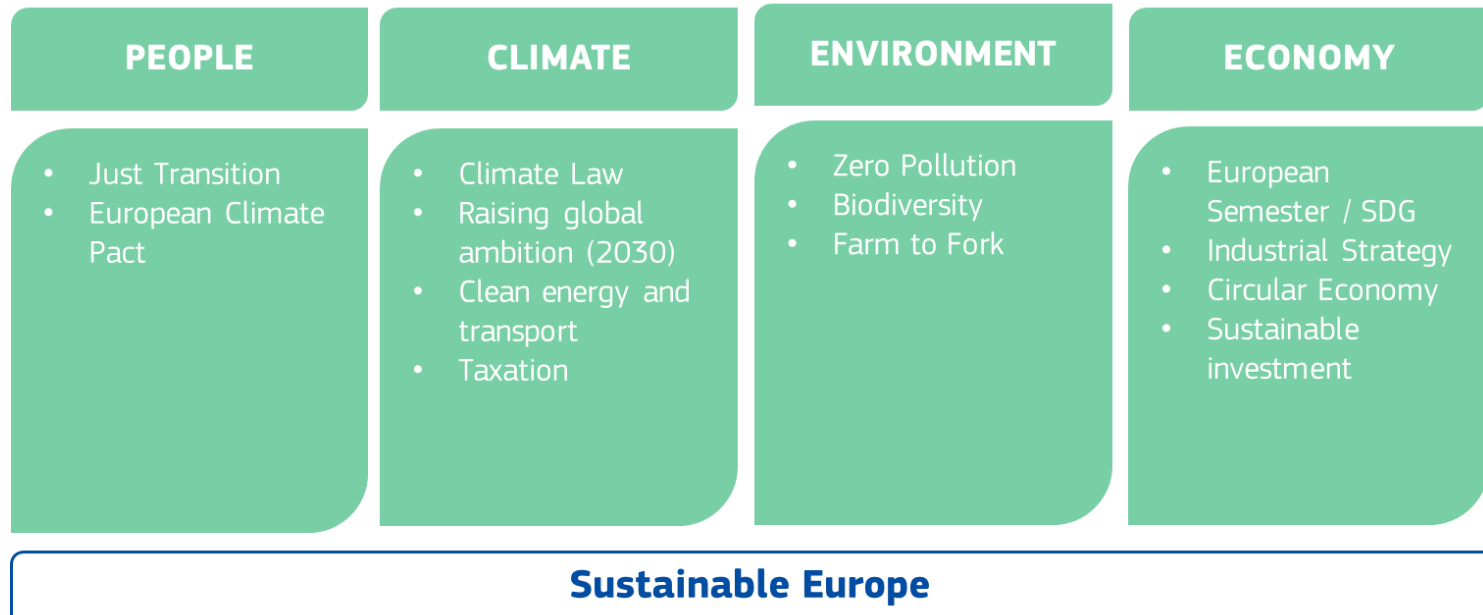
Natural gas' credibility may depend on reducing methane emissions

Indirect emissions intensity of global gas production, 2017 (source: IEA)

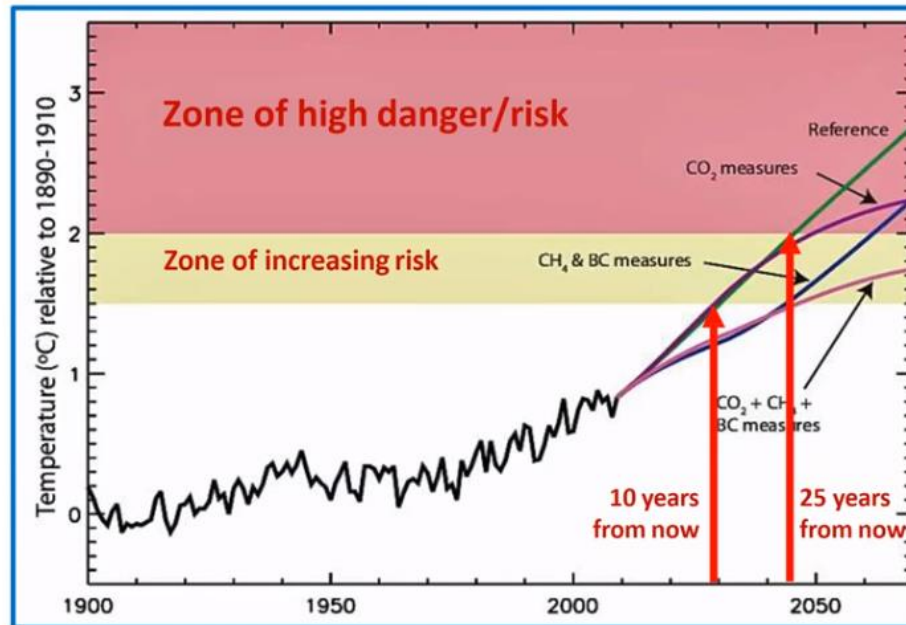


„I want a Europe to strive for more being the first climate-neutral continent“ (*Ursula von der Leyen*)

European Green Deal



Methane reductions are critical; we cannot reach COP21 target with CO₂ reductions alone





An EU methane strategy

"There will be an initiative in the field of **methane and methane leakage**, and Members of the European Parliament will be very closely involved in this **strategy**."

Kadri Simson, Energy Commissioner-designate

Improving measurement is key

Reduce methane emissions in the energy sector

Scope

Gas, oil,
coal

Whole supply
chain

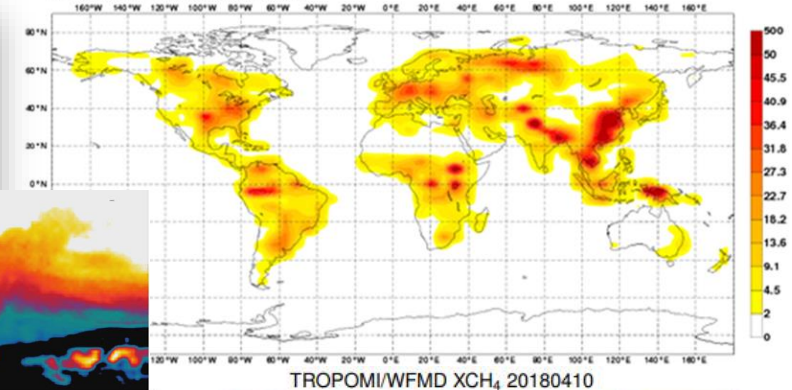
Venting, fugitives,
flaring, black carbon

Measurement, reporting, verification

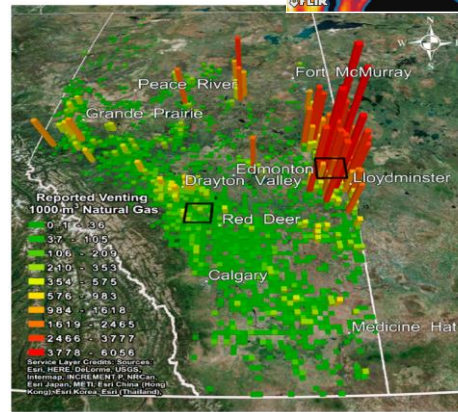
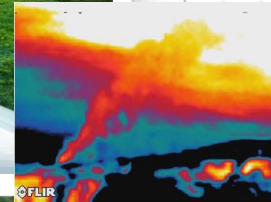
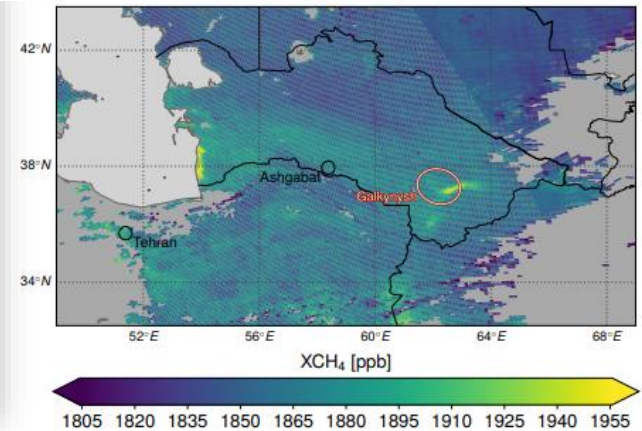
The role of technology and science

Methane flux inversions

MACC Delayed-mode Monitoring Flux Inversions June 2014
Methane emissions [mg CH₄ / m² / day]



TROPOMI/WFMD XCH₄ 20180410



Measurement, reporting, verification

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Internal actions

- DG Energy study
- Identify hotspots, superemitters in the EU
- Copernicus for detection and verification
- Improve reporting (tier 3) – legislative proposal?



Measurement, reporting, verification

As a major importer of gas, the EU has a responsibility

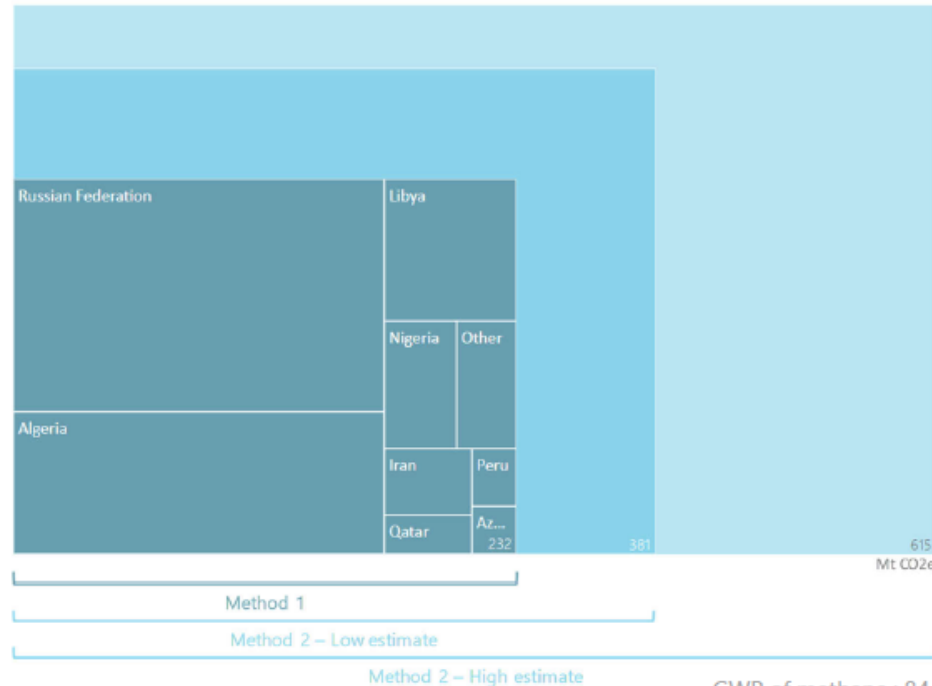
Estimated methane emissions within EU borders

76 Mt CO_{2e}



Estimated methane emissions from imported natural gas and LNG

232 – 615 Mt CO_{2e}



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External actions

- Cooperation under the UN CCAC
- Ambitious and transparent reporting
- Methane science studies
- Global Gas Flaring Reduction (GGFR)
- Energy diplomacy



Measurement, reporting, verification





Thank you for your attention!