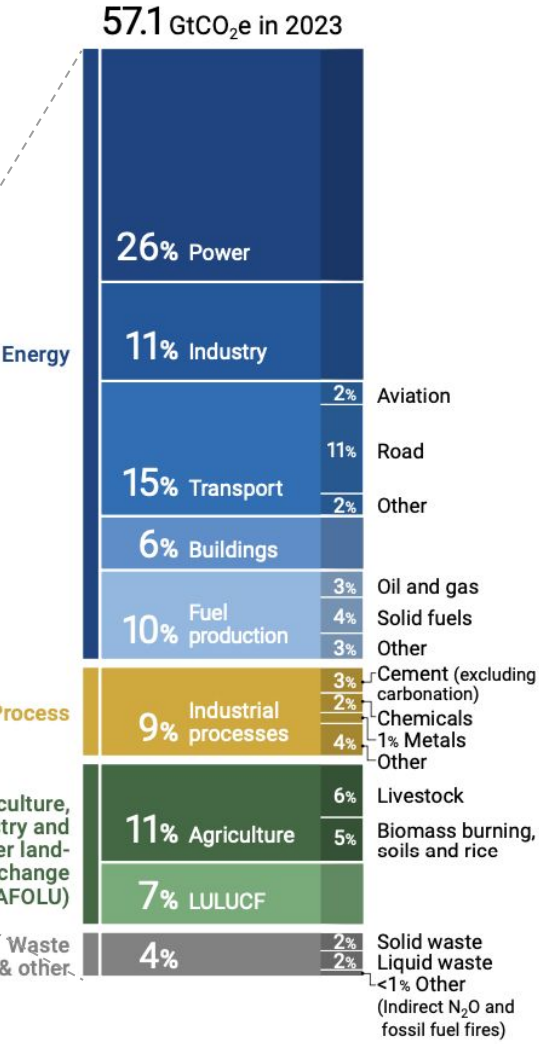
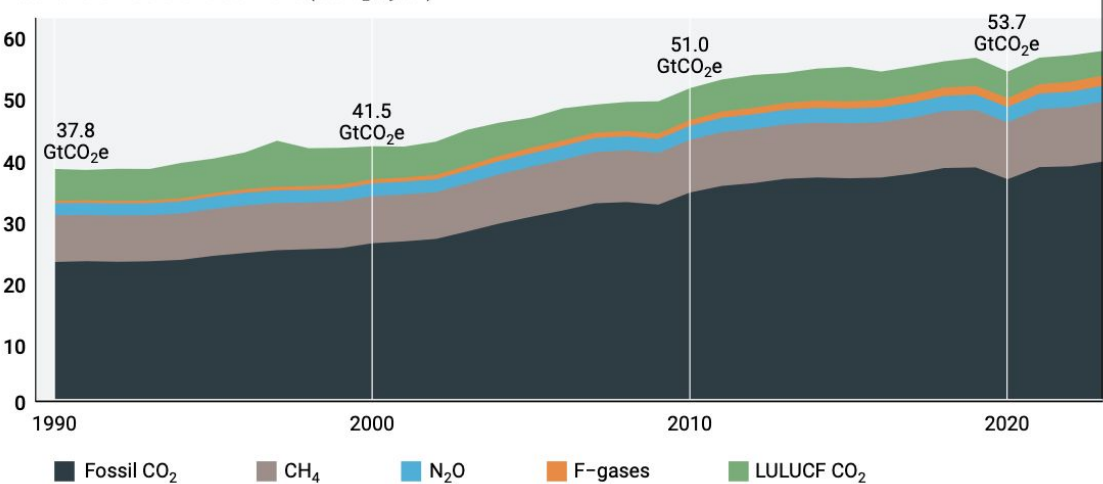


Cloudy with a Chance of Zero CO₂ (and a Swedish Twist!)

Jacob Valdemar, Platform Engineer at Lunar

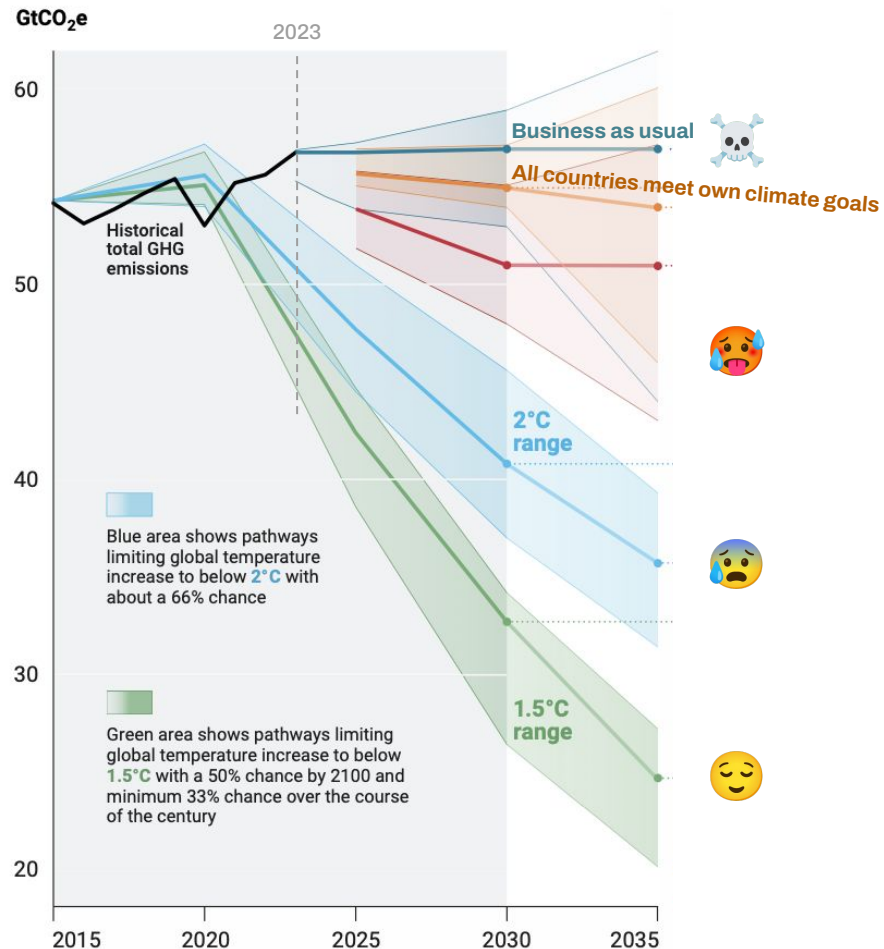
Global Emissions (Historical)

Total GHG emissions 1990–2023 (GtCO₂e/year)



United Nations Environment Programme (2024). Emissions Gap Report 2024: No more hot air ... please! With a massive gap between rhetoric and reality, countries draft new climate commitments. Nairobi. <https://doi.org/10.59117/20.500.11822/46404>.

Scenario S



**Data Centres
account for
0.3–0.6% of
global emissions**

**What
can we
do?**

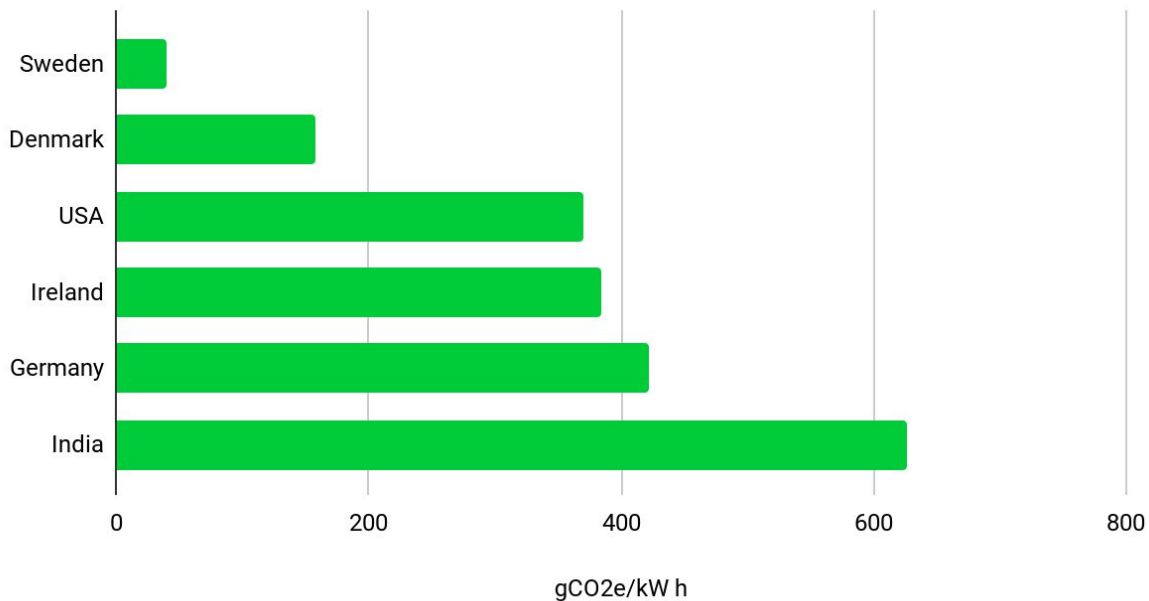


Introducing
the **MYSTS**
approach...

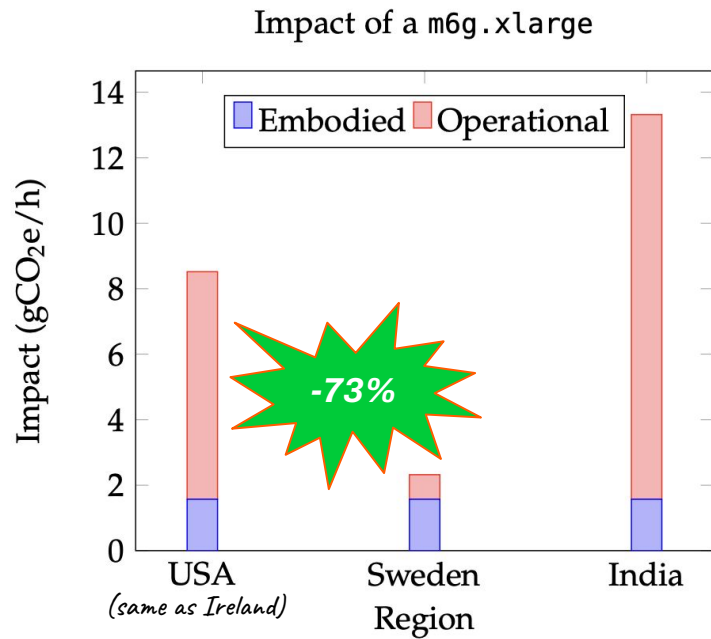
**Move
Your
Stuff
To
Sweden**

Extremely Low Grid Emissions

Power Generation Emissions



Example with `m6g.xlarge`



The advanced approach



CARBON EFFICIENT KARPENTER
Optimizing Kubernetes Cluster Autoscaling for Carbon Efficiency

JACOB VALDEMAR ANDREASEN

Master's Thesis
Master of Science in Computer Engineering



Department of Electrical and Computer Engineering
Aarhus University

January 2024

Thank you .

(please MYSTS)