

# Glass Beverage Bottles in a Net Zero World



# Is Net Zero Enough?\*

(\*NO)

The Journey is just as important as the destination

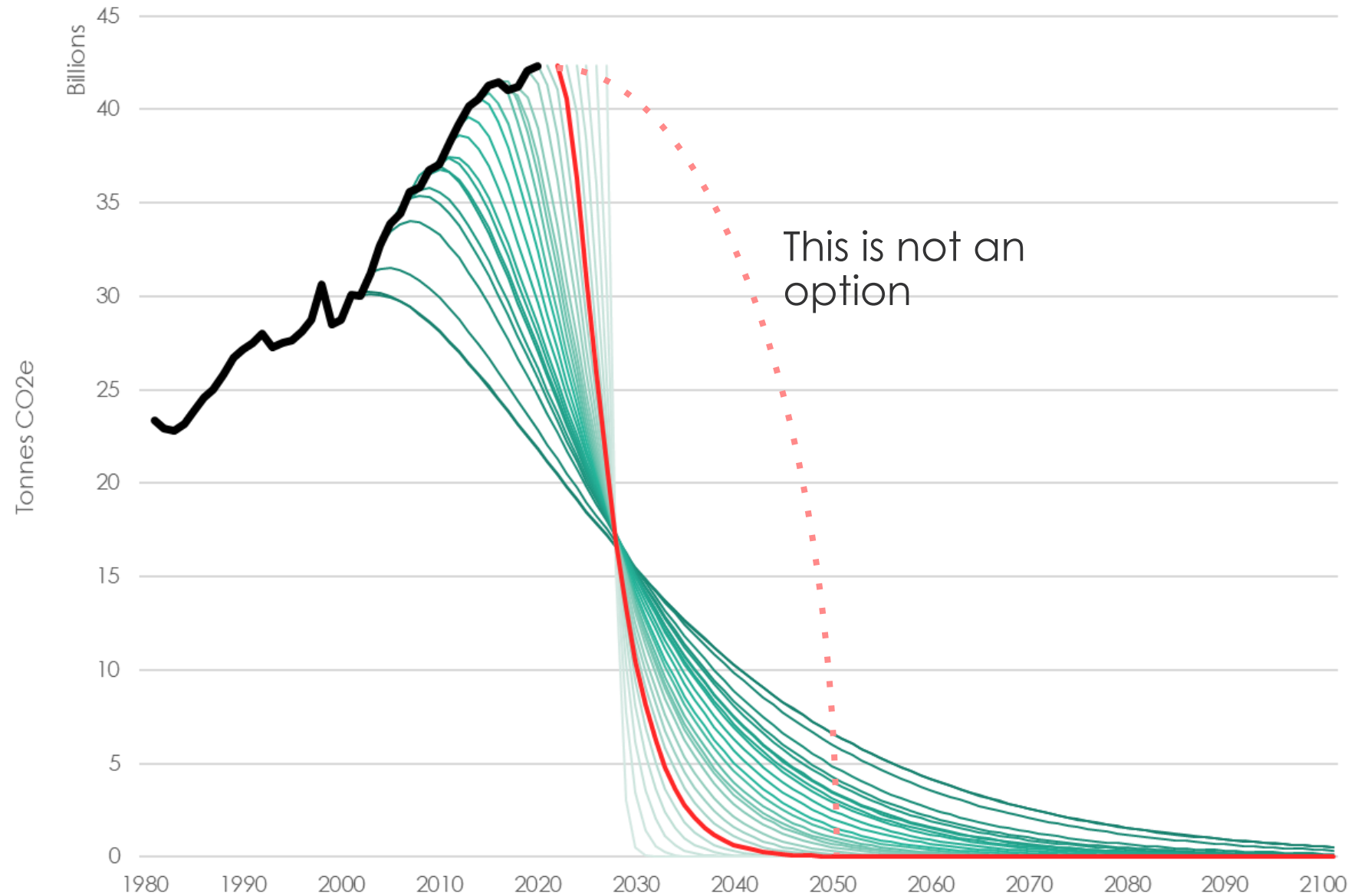
## Is Net Zero Enough for the Material Production Sector?

Analysing the decarbonisation pathways for key material sectors and their ability to meet global carbon budgets

November 2022



# CO<sub>2</sub> reductions needed to keep global temperature rise below 1.5°C



# 400gt

Global Carbon dioxide  
emissions limit to stay  
under **1.5°C**

(That's 10 years at the current rate)

IPCC AR6 66% Chance



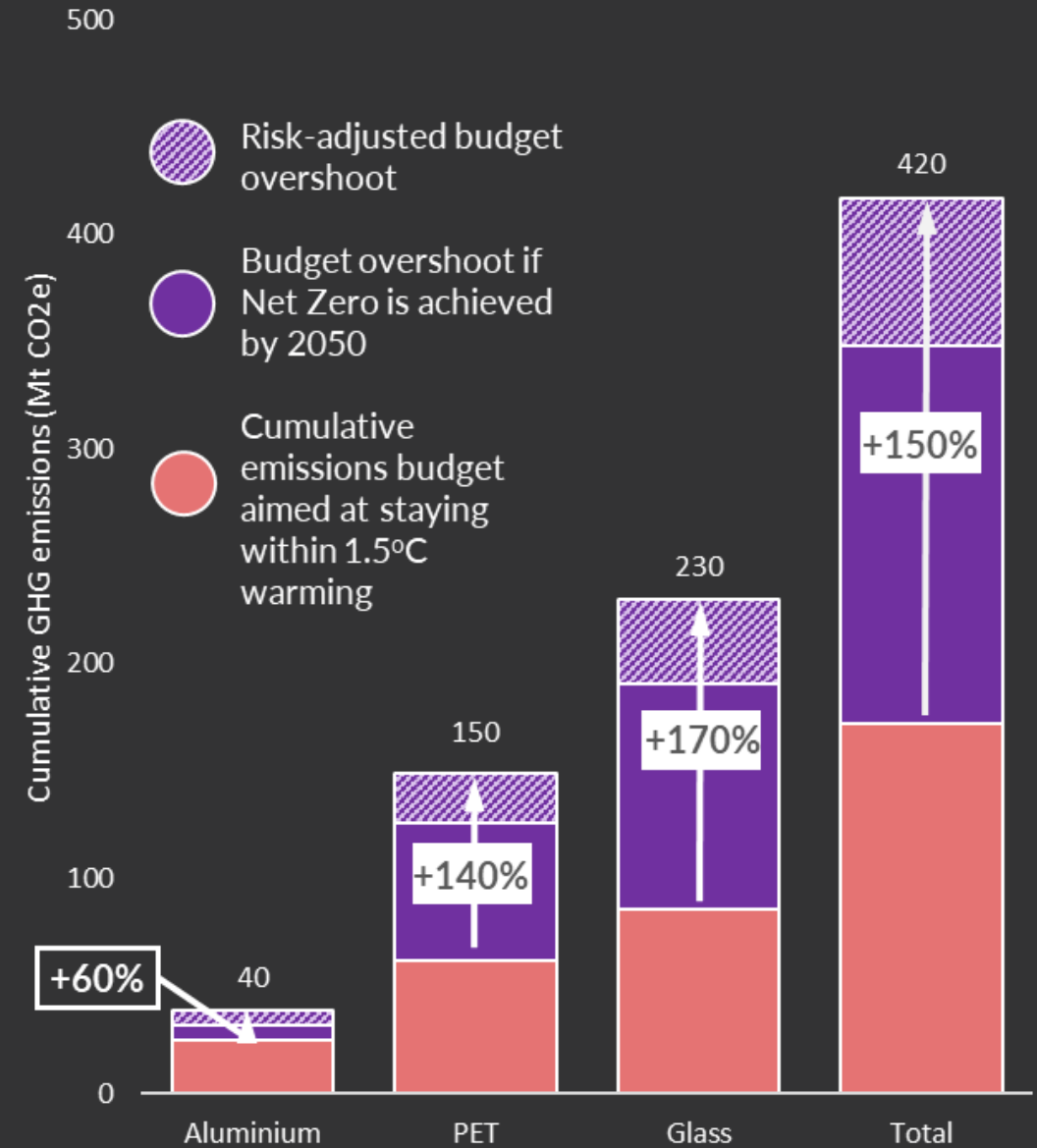
# 170mt

Carbon dioxide  
emissions budget for  
**European beverage  
containers** to stay under  
**1.5°C**

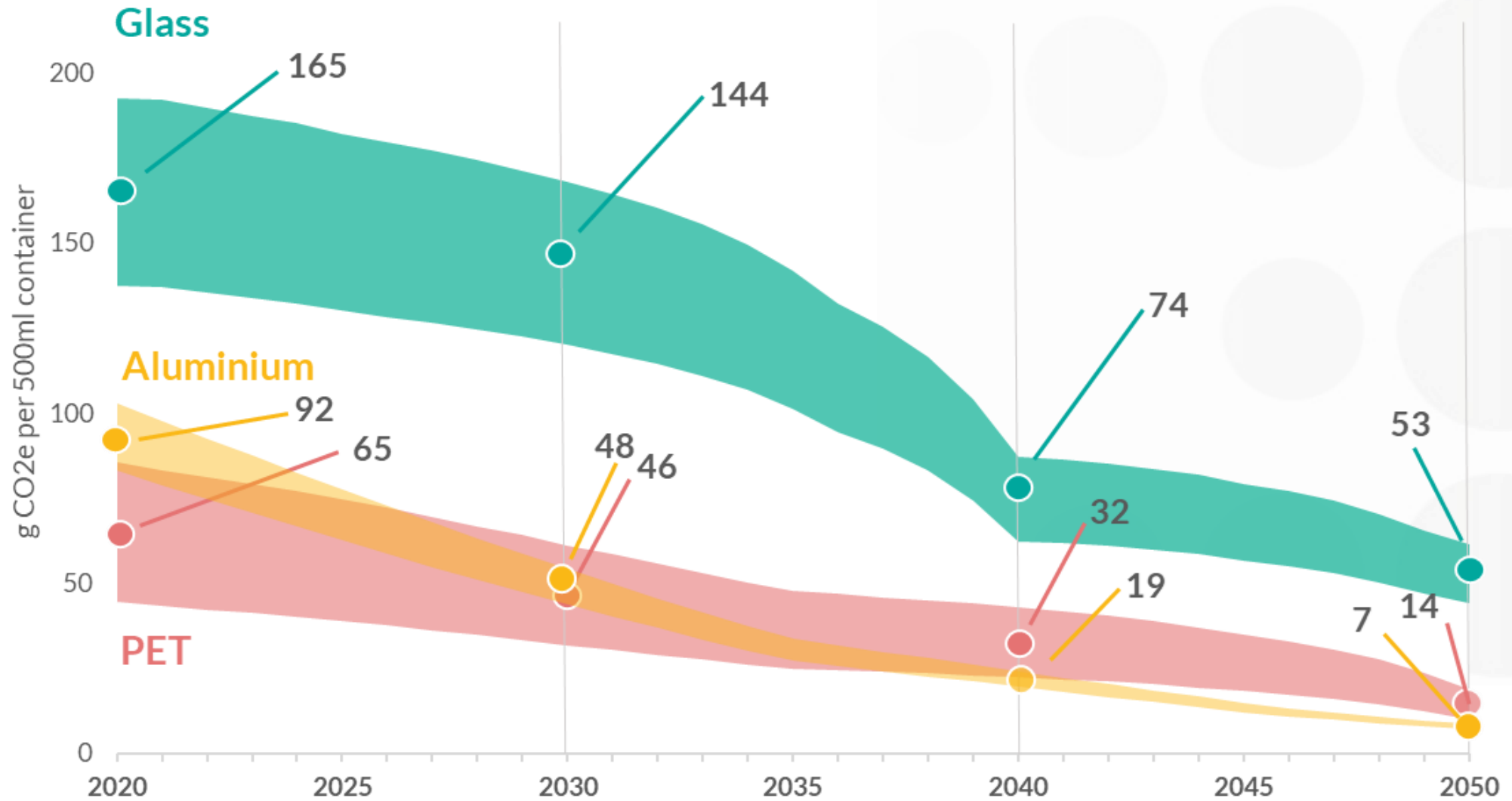


# Comparing Carbon Budgets

- Realistic Net Zero pathways were modelled
- The overall budget is exceeded by +150%
- All materials exceed their individual budgets
- Simply switching materials does **not** keep within the budget



# Decarbonisation Pathways for 500ml Single Use Beverage Containers



# Comparing Energy Use

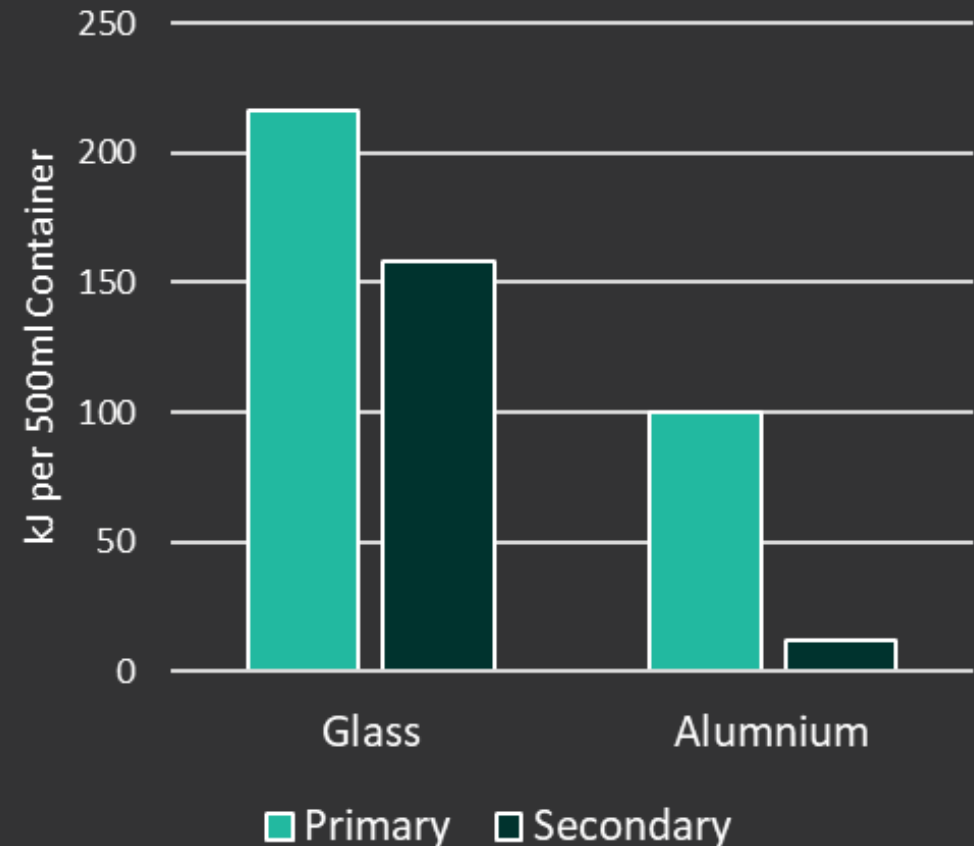
## Glass (500ml)

- Primary - 216kJ
- Recycling 75% energy
- Secondary – 158kJ

## Aluminium (500ml)

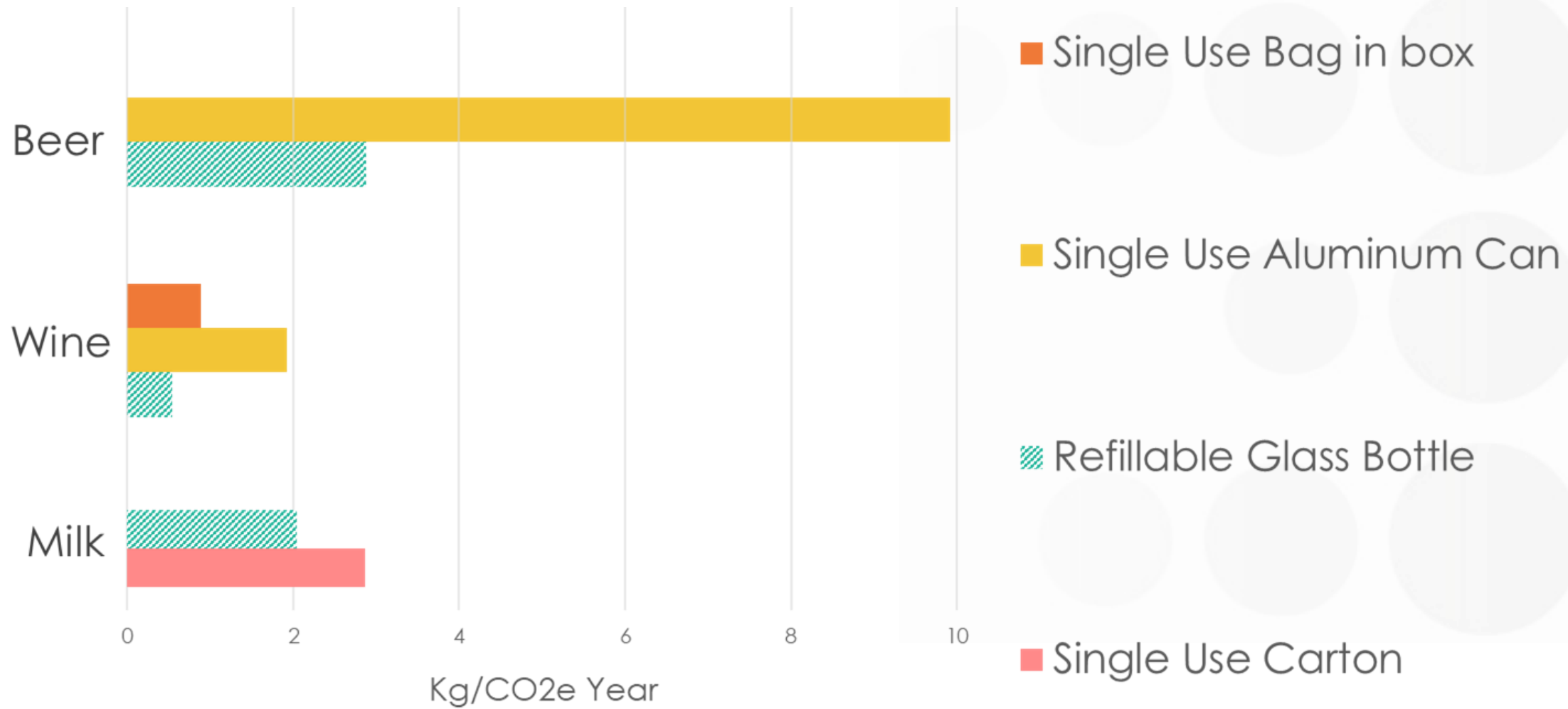
- Primary – 100kJ
- Recycling 12% energy
- Secondary – 12kJ

\*Switch to hybrid furnace can reduce energy demand by ~30%





# Beverage Reuse Systems in the USA – Results preview





Simon Hann  
simonhann@eunomia.co.uk

Download our reports from  
[www.eunomia.co.uk](http://www.eunomia.co.uk)

# Thank You



## About Eunomia

Eunomia is an independent sustainability consultancy driven by a genuine passion to make a positive change to the clients we work with and the communities they operate in. Founded in 2001, we have been pioneers in the sector - early advocates for helping NGOs as well as leading public and private sector organisations in the UK and overseas to adapt their approach and adopt more sustainable processes.

Our consultants are experts in the field, deeply immersed in the subject with the technical knowledge and skill to offer clients innovative, clear and practical recommendations. We are committed to finding solutions to better protect the planet, while supporting the wider aims and needs of our clients.

Each client is treated as an individual, with consultants taking the time to understand their objectives and how best we can support them. This personal service ensures a strong relationship is forged, based on honest and regular communication. It also ensures if these objectives change, there is the flexibility to adapt.

As an established leading independent consultancy, clients can have complete confidence that consultants will offer evidence-led solutions based on robust, impartial thinking that offer both pragmatic and positive outcomes.