

NEWCASTLE'S EMISSIONS PROFILE and NEWCASTLE EMISSION REDUCTION PLAN

Alec Roberts

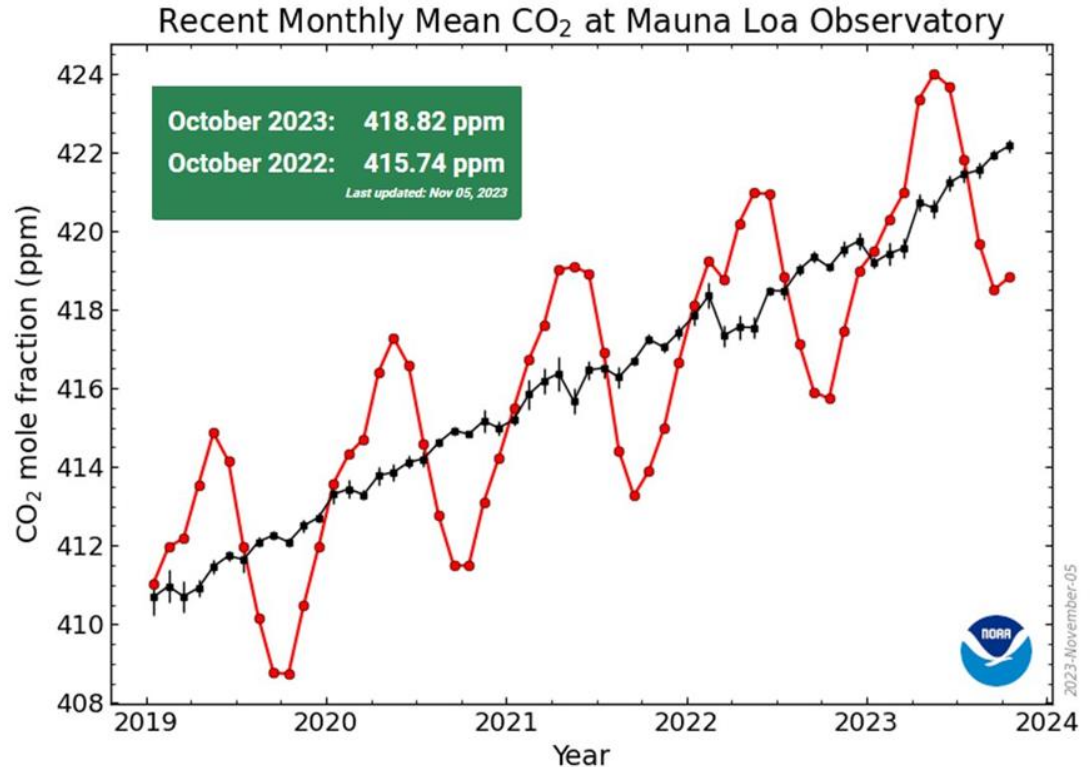
Newcastle Climate Action Summit

18 November 2023

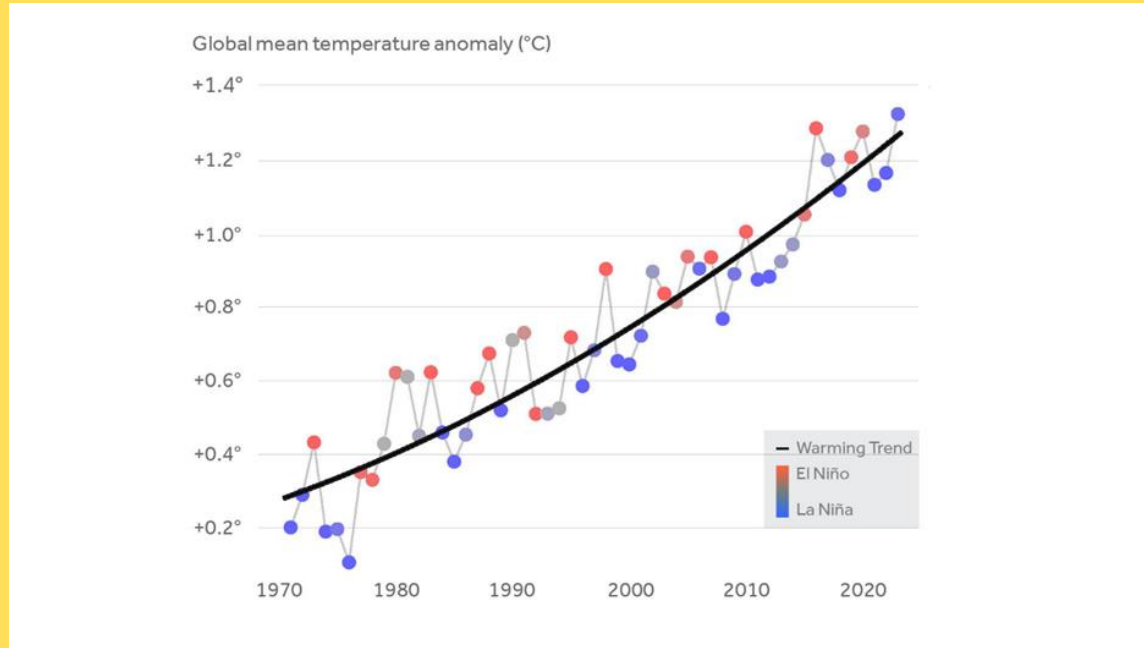


The Problem

- Rising levels of CO₂ and other greenhouse gases
- Causing Global warming
- Causing Climate Change

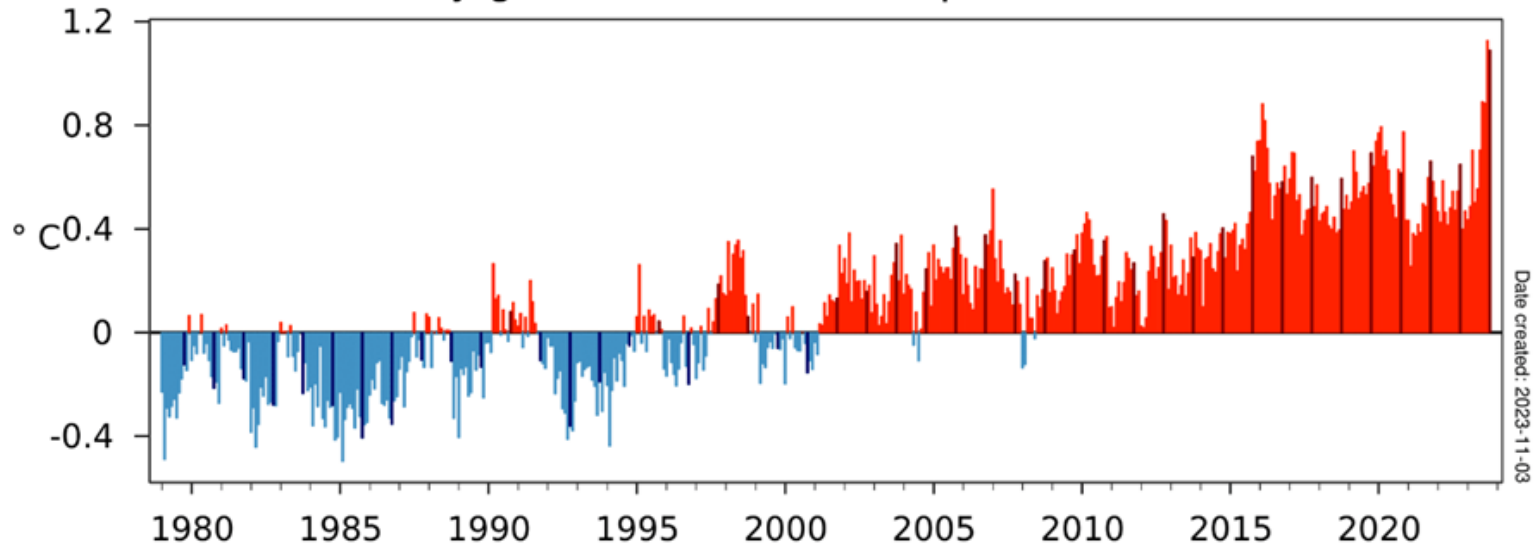


October 2023 capped the hottest 12-month span in recorded history



(Climate Central, 2023)

Monthly global surface air temperature anomalies



(Data: ERA5. Reference period: 1981-2010. Credit: C3S/ECMWF)

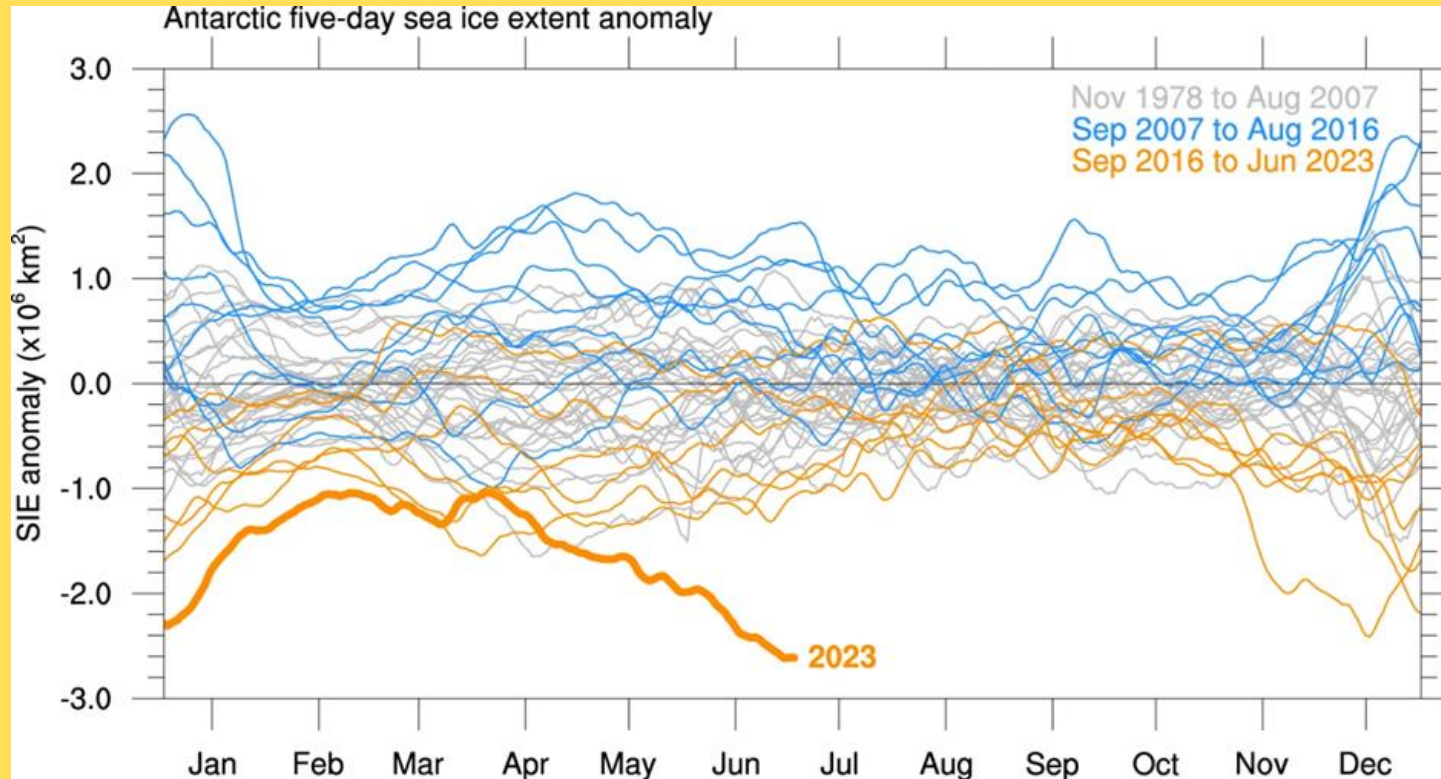


PROGRAMME OF
THE EUROPEAN UNION



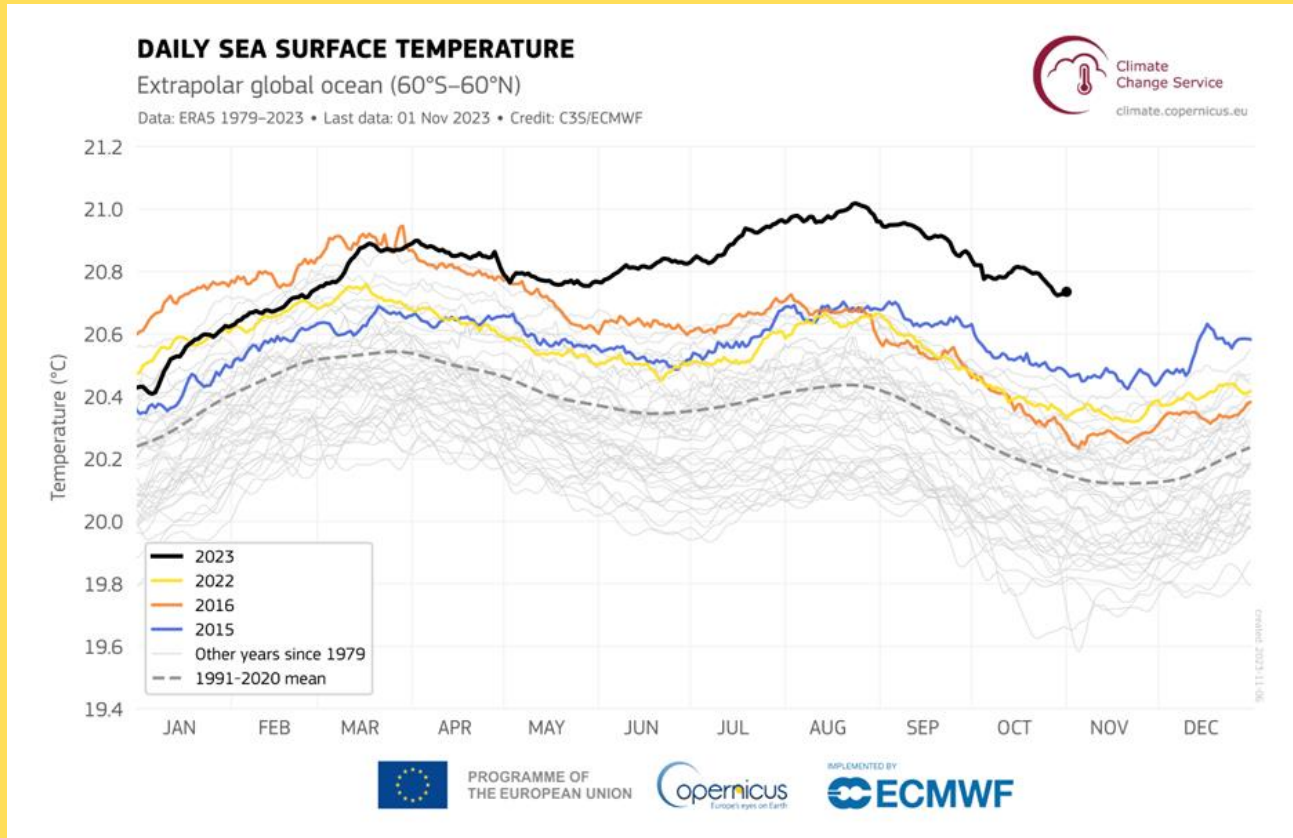
(Copernicus, 2023)

Antarctic sea ice extent has remained exceptionally low throughout the first half of 2023.



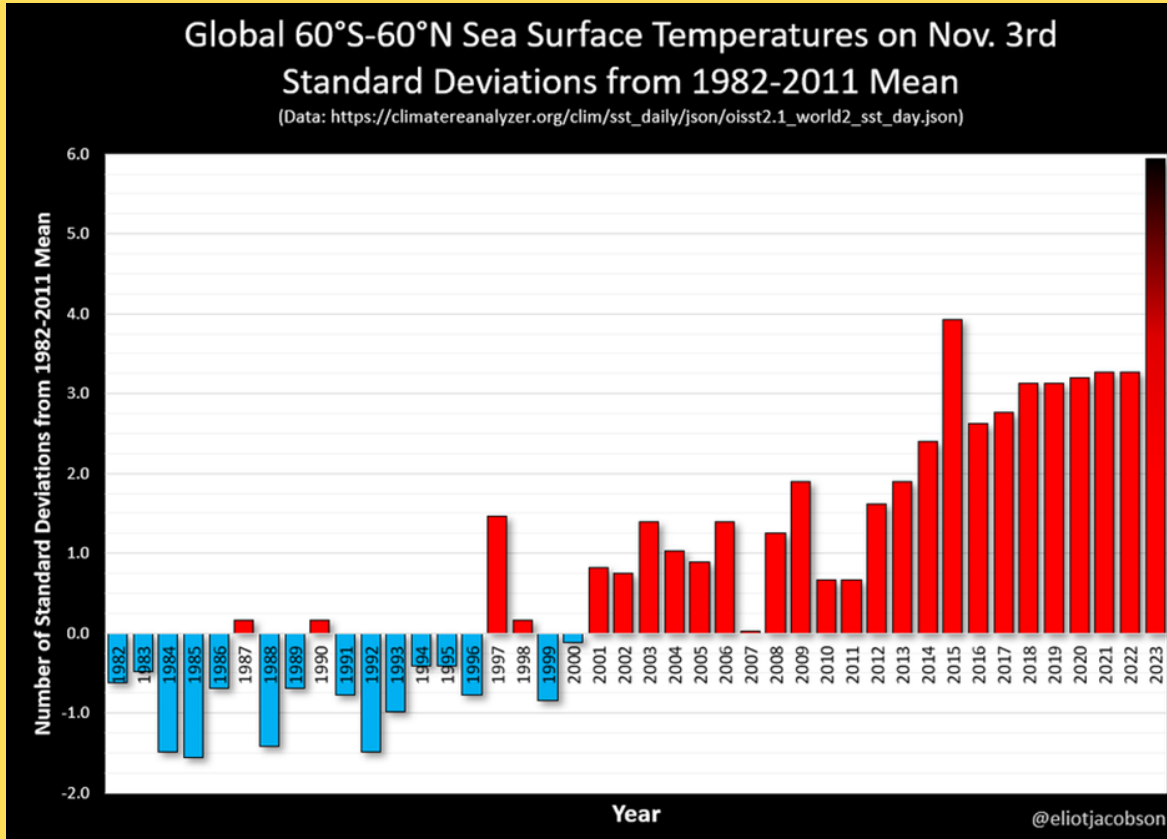
(Purich & Doddridge, 2023)

Daily sea surface temperature in the Arctic and Antarctic.



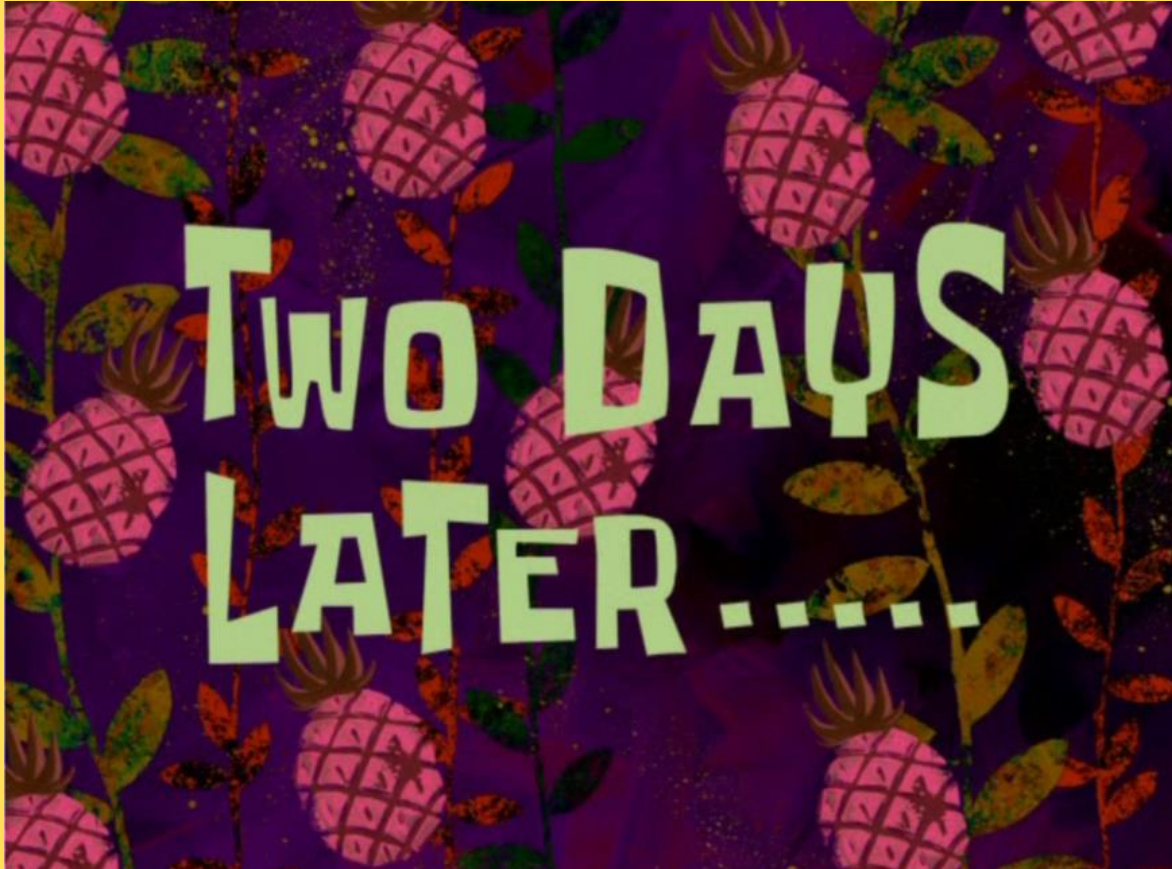
(Copernicus, 2023)

What's the likelihood of these temperature anomalies?

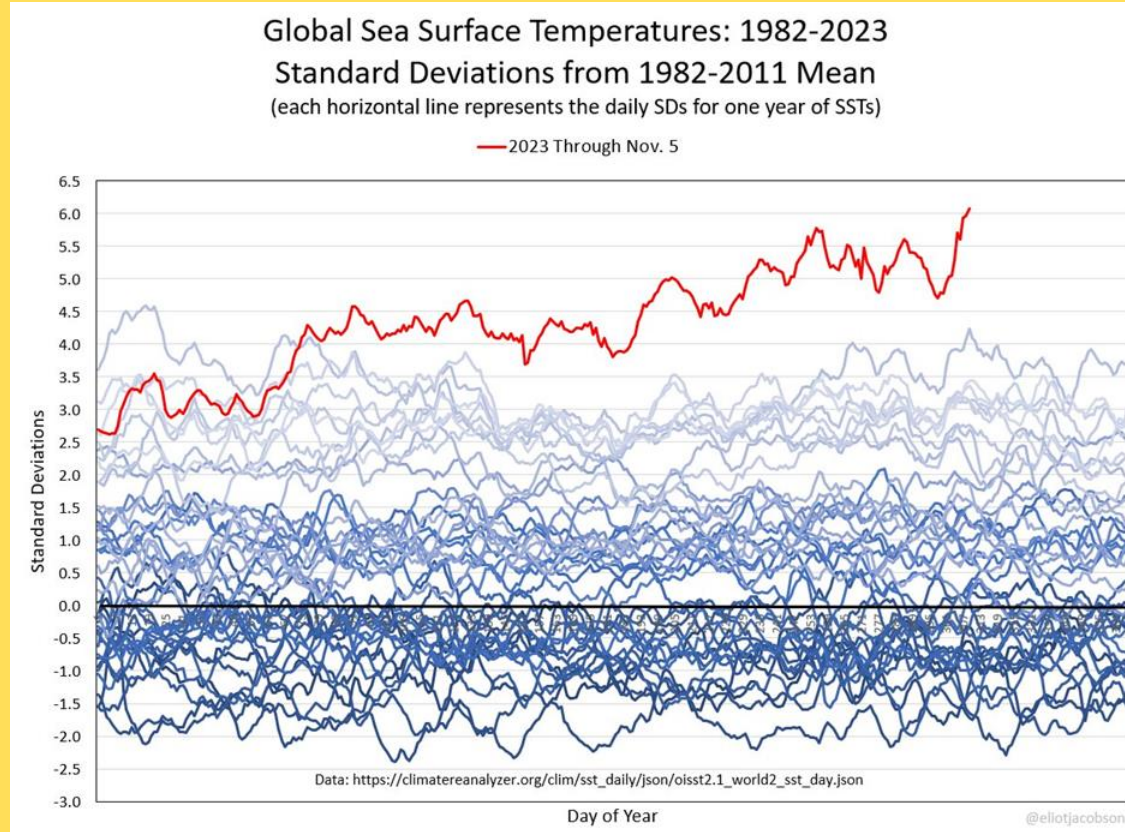


(Jacobson, 2023)

However...



What's the likelihood of these temperature anomalies?



(Jacobson, 2023)

A parting thought...



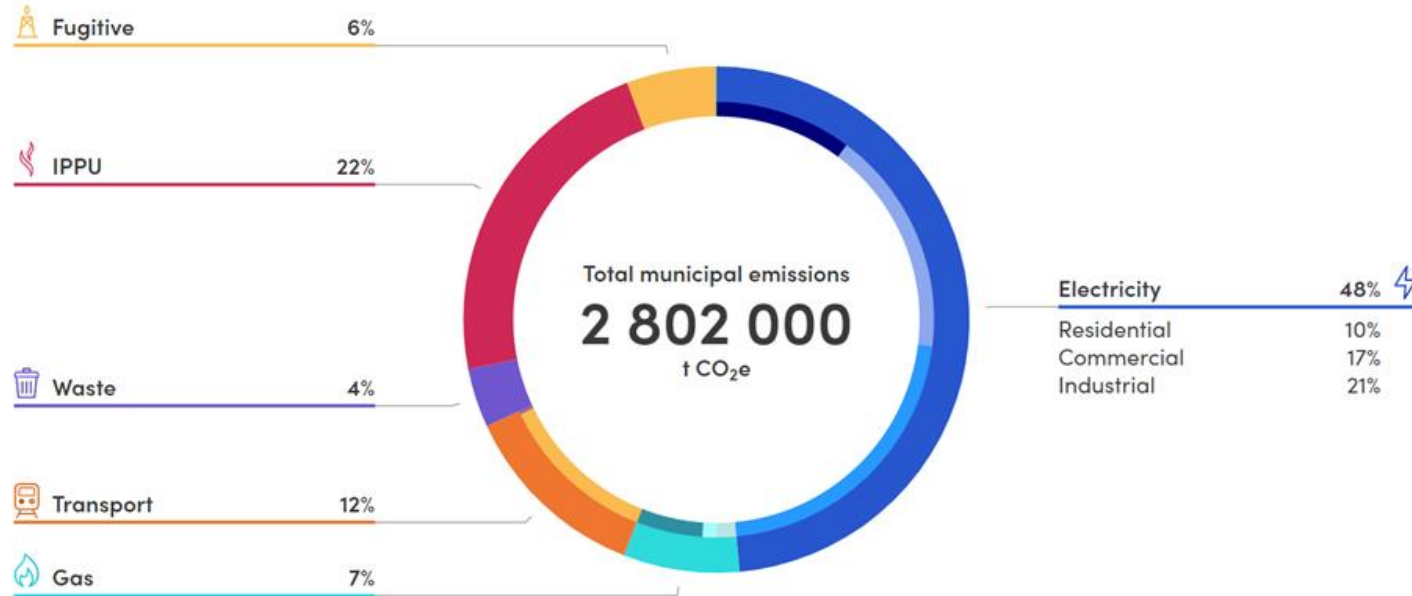
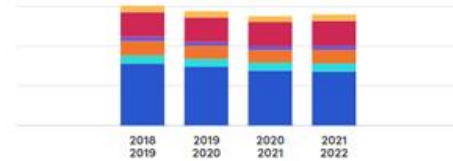
(Kowalis, 2022)

NEWCASTLE'S EMISSIONS PROFILE



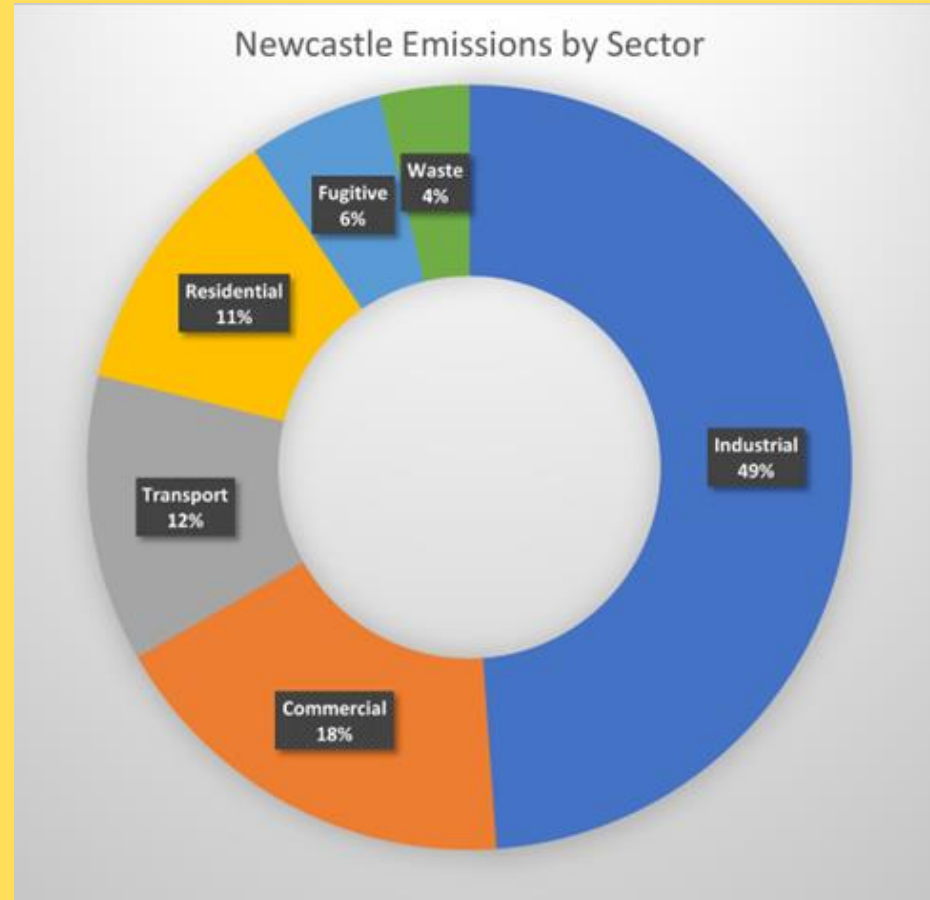
Newcastle

2021/22 municipal emissions snapshot



(Ironbark Sustainability and Beyond Zero Emissions, 2022)

Emission Sectors

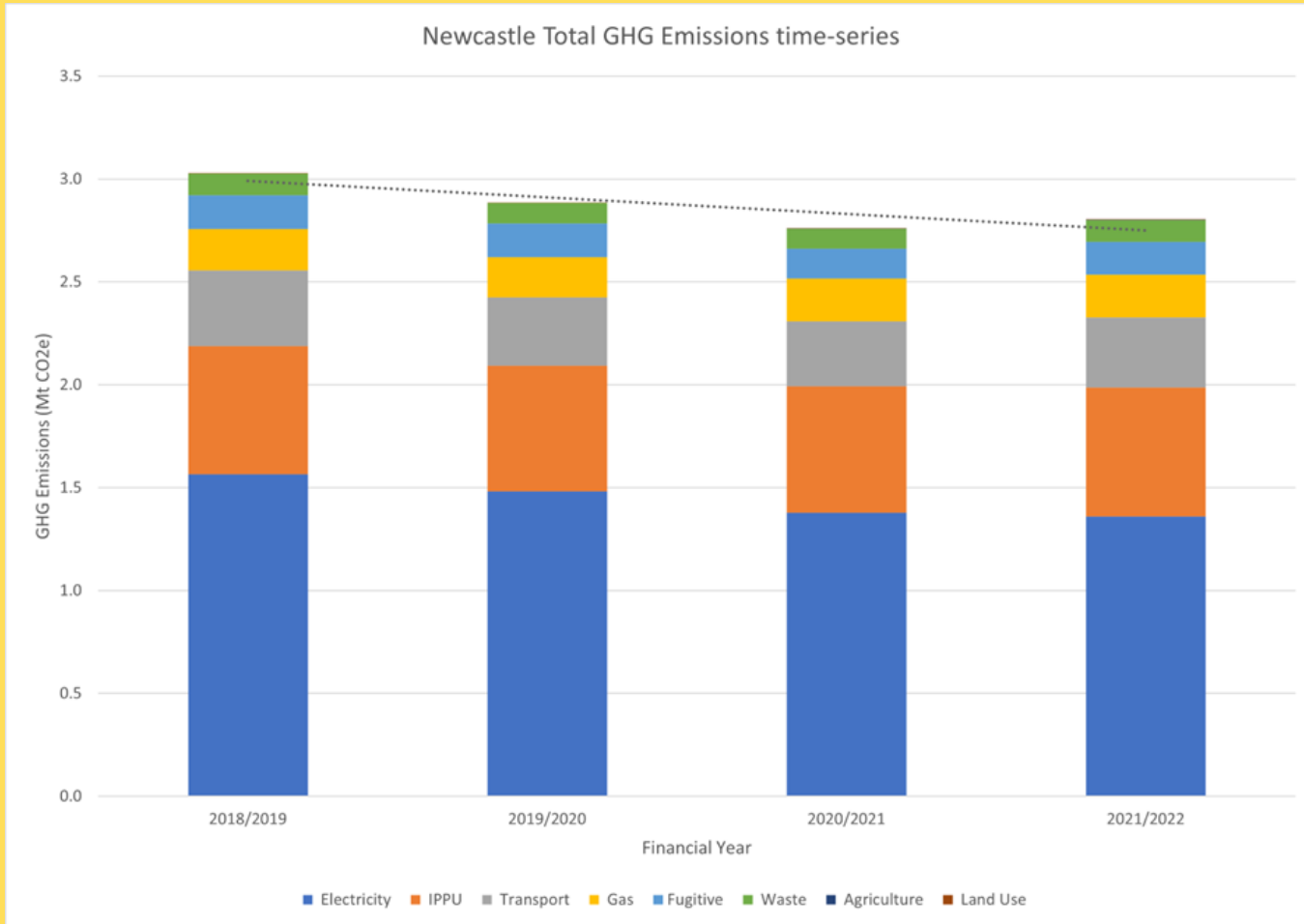


Emission Targets and Projections

City Aspirational Goals for 2025:

- 30% reduction in city-wide emissions
- 100MW of new renewable generation capacity
- 1 MW of new community renewable energy projects
- 30% reduction in average daily electricity consumption
- 500GWh of new Renewable Power Purchase Agreements
- 10,000 registered electric vehicles
- Secure commitment from 20 of the Largest Newcastle Businesses to target Net Zero Emissions no later than 2030

And targeting Net Zero Emissions from Electricity by 2030



(Ironbark Sustainability and Beyond Zero Emissions, 2022)

Sector Emissions



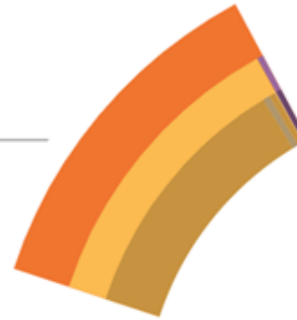
Transport Emissions



Transport

Source %

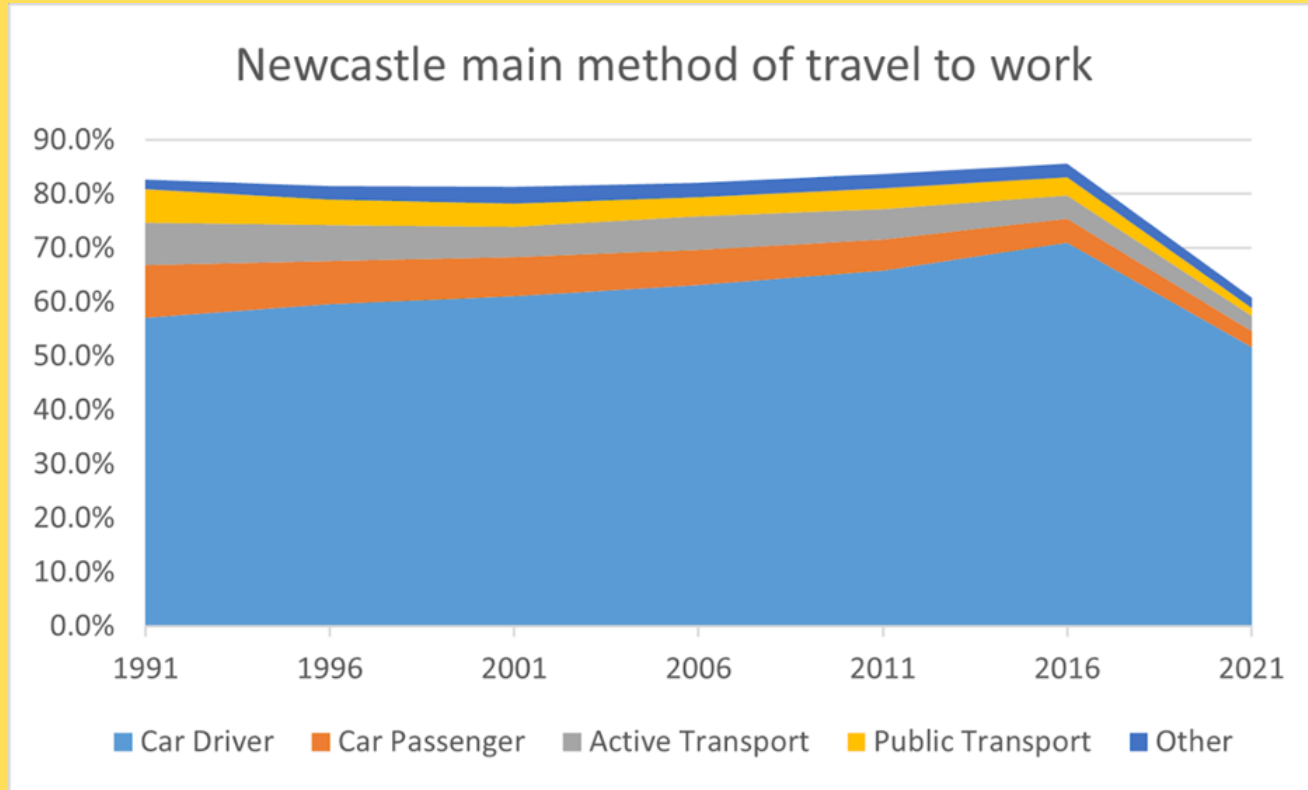
On road	98%
Automotive	92%
Freight	3%
Bus	2%
Motorcycle	1%
Rail	2%
Train	2%



Transport emissions
340 000
t CO₂e

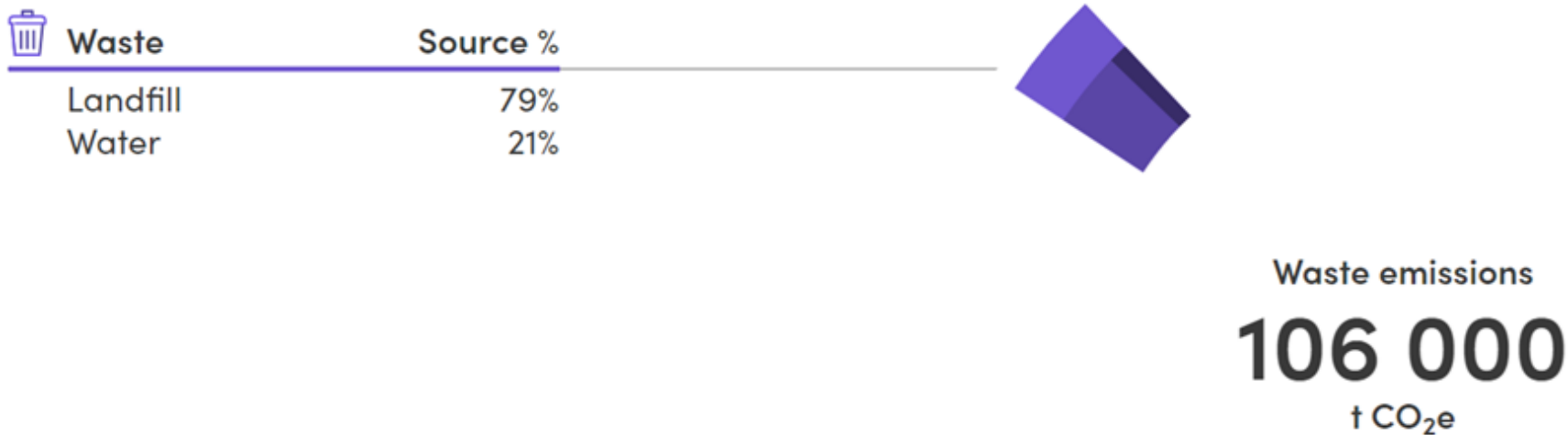
(Ironbark Sustainability and Beyond Zero Emissions, 2022)

Transport Emissions



(ABS, 2016; 2021, City of Newcastle, 2014).

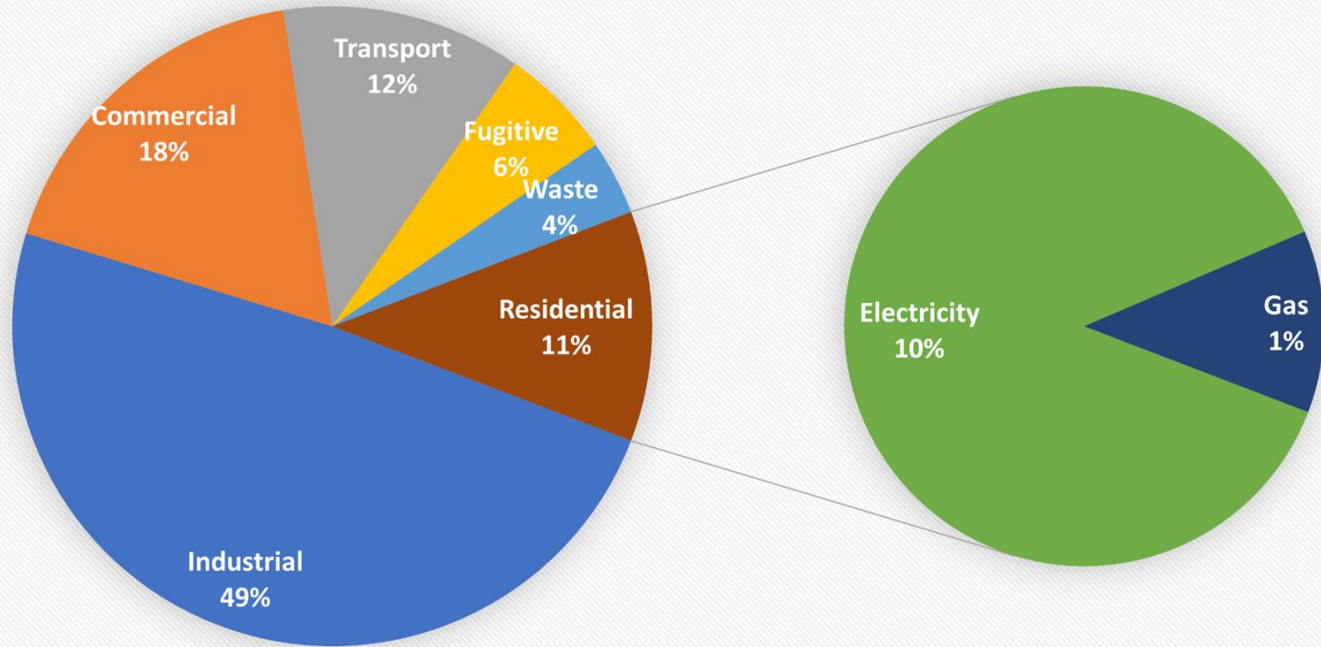
Waste Emissions



(Ironbark Sustainability and Beyond Zero Emissions, 2022)

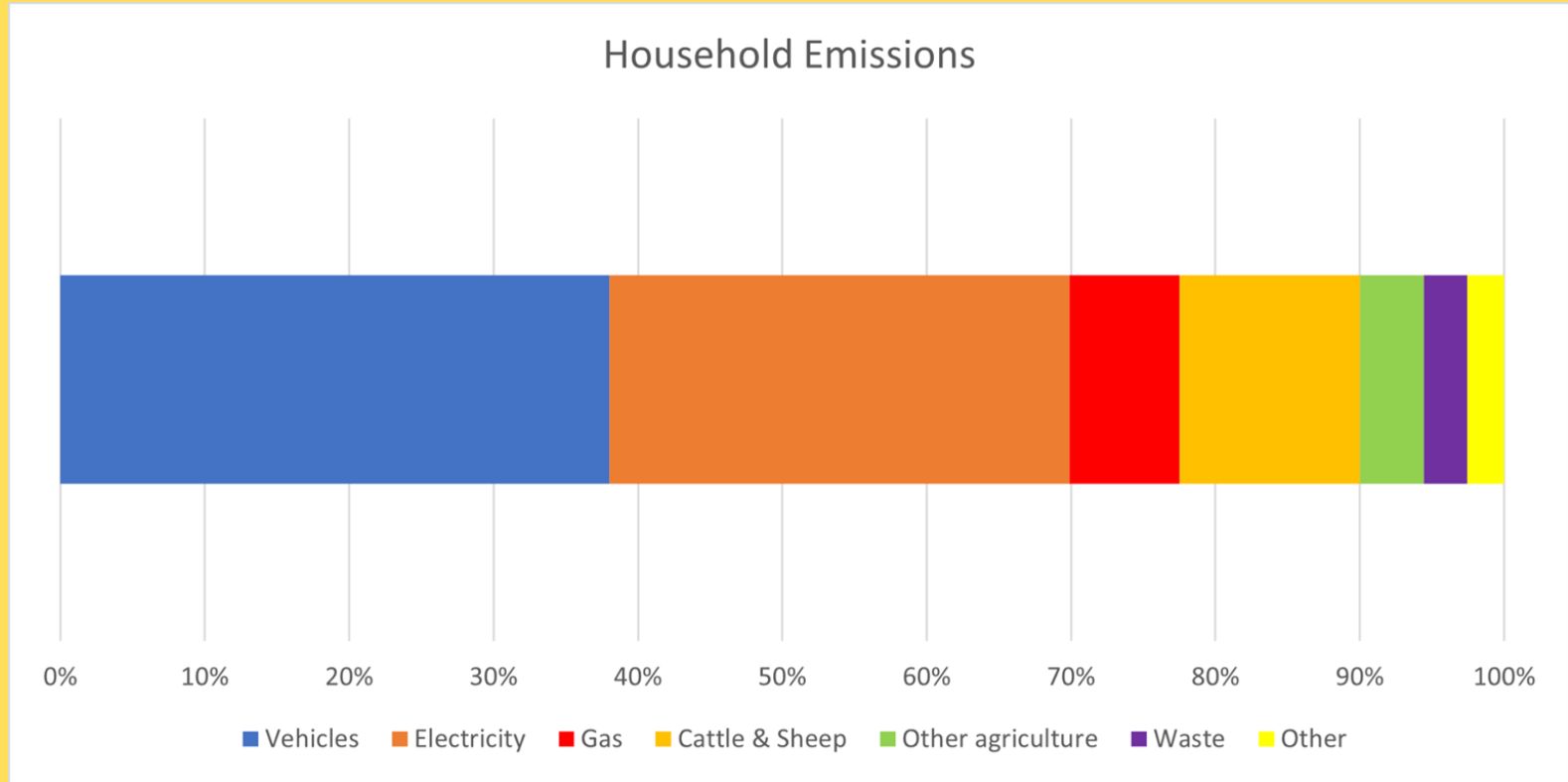
Residential Emissions

Newcastle Residential Emissions



(Ironbark Sustainability and Beyond Zero Emissions, 2022)

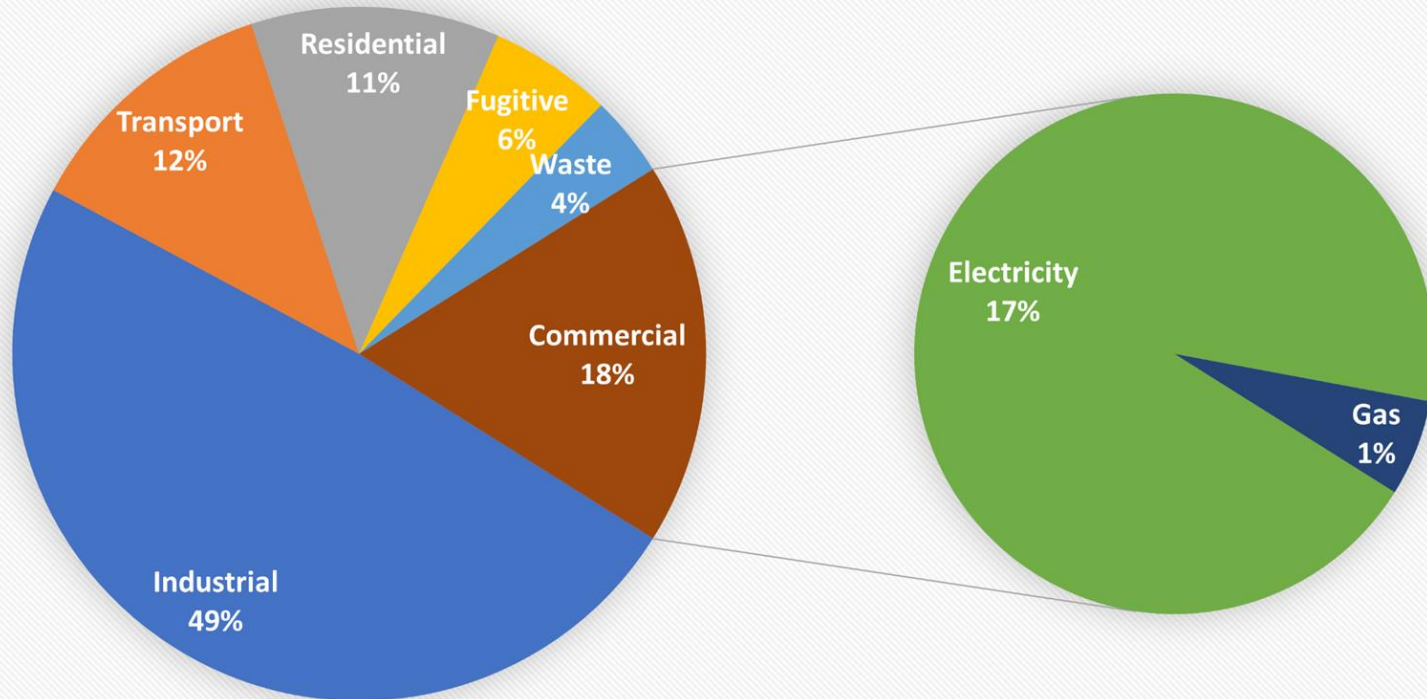
Residential Emissions



(Griffith, 2022)

Commercial Emissions

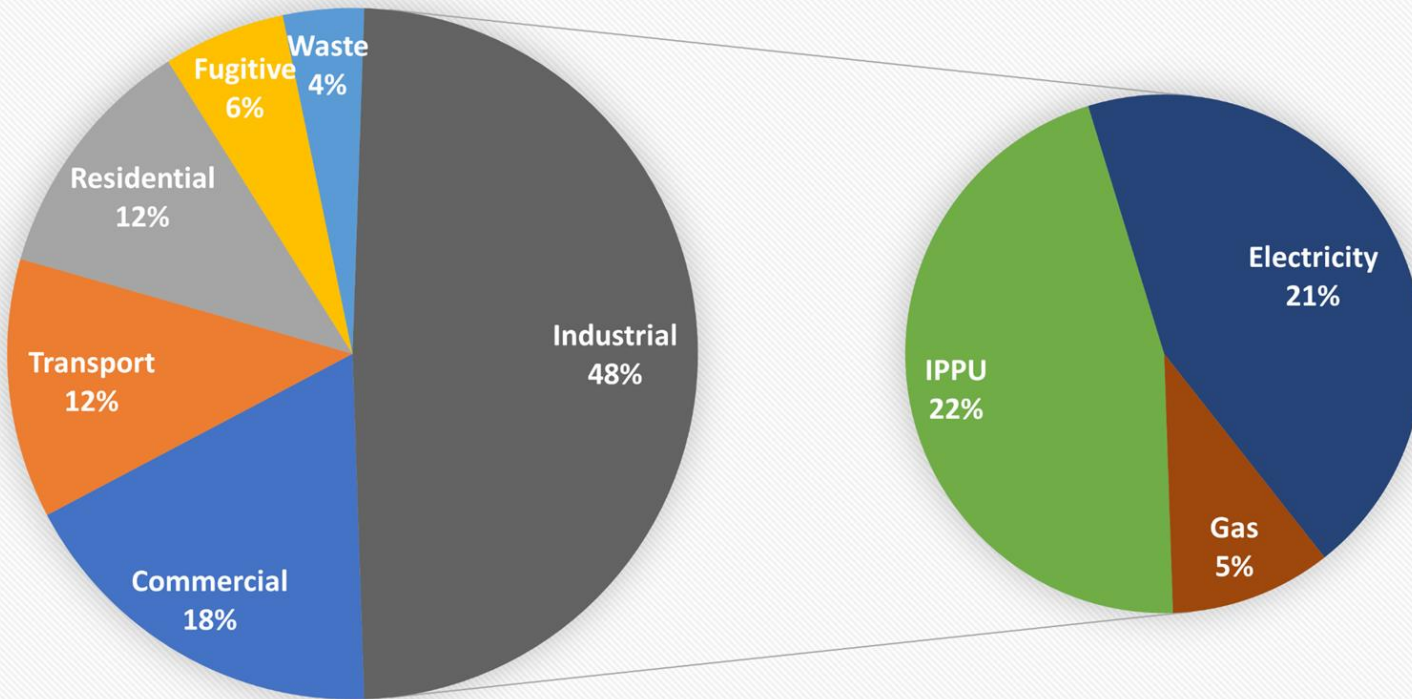
Newcastle Commercial Emissions



(Ironbark Sustainability and Beyond Zero Emissions, 2022)

Industrial Emissions

Newcastle Industrial Emissions



(Ironbark Sustainability and Beyond Zero Emissions, 2022)

Industrial processes and product use Emissions



(Ironbark Sustainability and Beyond Zero Emissions, 2022)



NEWCASTLE EMISSION REDUCTION PLAN

- Develop an ambitious emission reduction plan for the City of Newcastle Local Government Area to reduce GHG emissions by 50% by 2030,
- Actively involve community members and leaders, including business, industry, and all levels of government,
- Build support for the implementation of the plan,
- Increase awareness and commitment to reducing greenhouse gas emissions.

**CLIMATE
ACTION
NEWCASTLE**

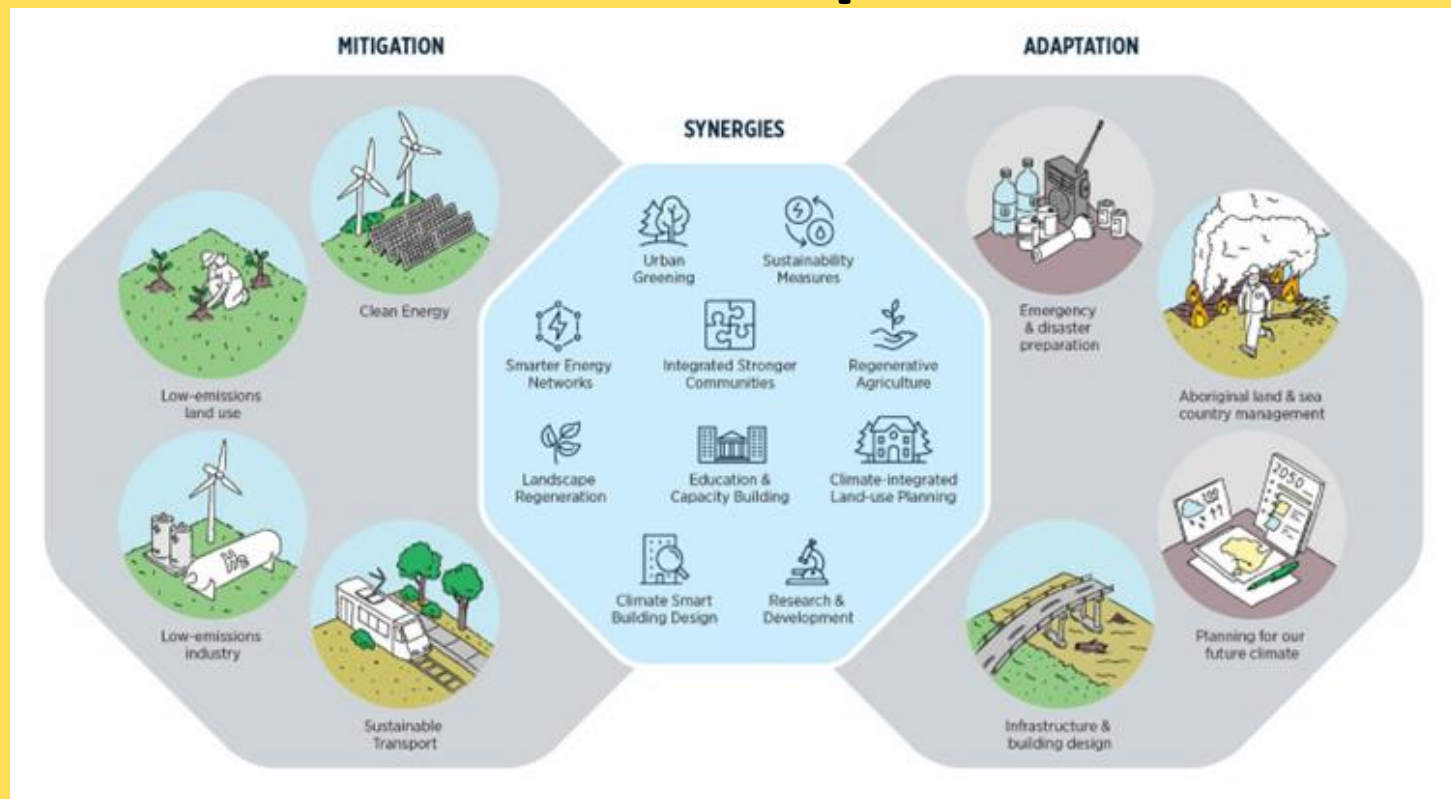


Aim for Real Zero and Don't Settle for Net Zero



(Australian Parents for Climate Action; Roberts, 2023a)

Focus on Climate Mitigation rather than Climate Adaptation



(AdaptNSW; Roberts, 2023b)

Methodology

- Emission sectors
- Emission Data
- Sector Emission Reduction Strategies
- Emission Sector Working Groups
- Emission reduction idea capture, analysis, and selection
- Climate Summit- Presentations, Table Talks, Harvest Learnings
- Post-Summit

Emissions sectors



Transport



Waste



Residential



Commercial



Industrial

Emission Data



snapshot
COMMUNITY CLIMATE TOOL

Ironbark
Sustainability



Sector Emission Reduction Strategies

- Strategic policy context: latest GHG emissions, Legislation, Policies and Plans that exist that involve emission reduction in that sector.
- Key Issues
- Case Studies
- Strategic opportunities to lower sector emissions and Future Scenarios

Other cities with community-led plans

Augusta Margaret River; Randwick



Climate Action Plan

Part 1 – Towards Zero Emissions
2020–2030



Natural | Connected | Prosperous

Emission Sector Working Groups

- Working groups formed for each emission sector.
- Develop Emission Reduction Strategy for their Sector and presentation of Strategy at the Climate Summit

Emission reduction idea capture, analysis, and selection

- Ideas captured through a web form, stakeholder and public meetings and Table Talks
- Ideas selected against a predetermined criteria of both mandatory and desirable objectives (e.g. idea must lead to a reduction in emissions)

Climate Summit

- Present top selected ideas from each sector emission reduction strategy
- Table Talks conducted for each Emission Sector Strategy to get feedback and commitment from key stakeholders and the public.
- Harvest Learnings
- Newcastle Emission Reduction Charter & Alliance

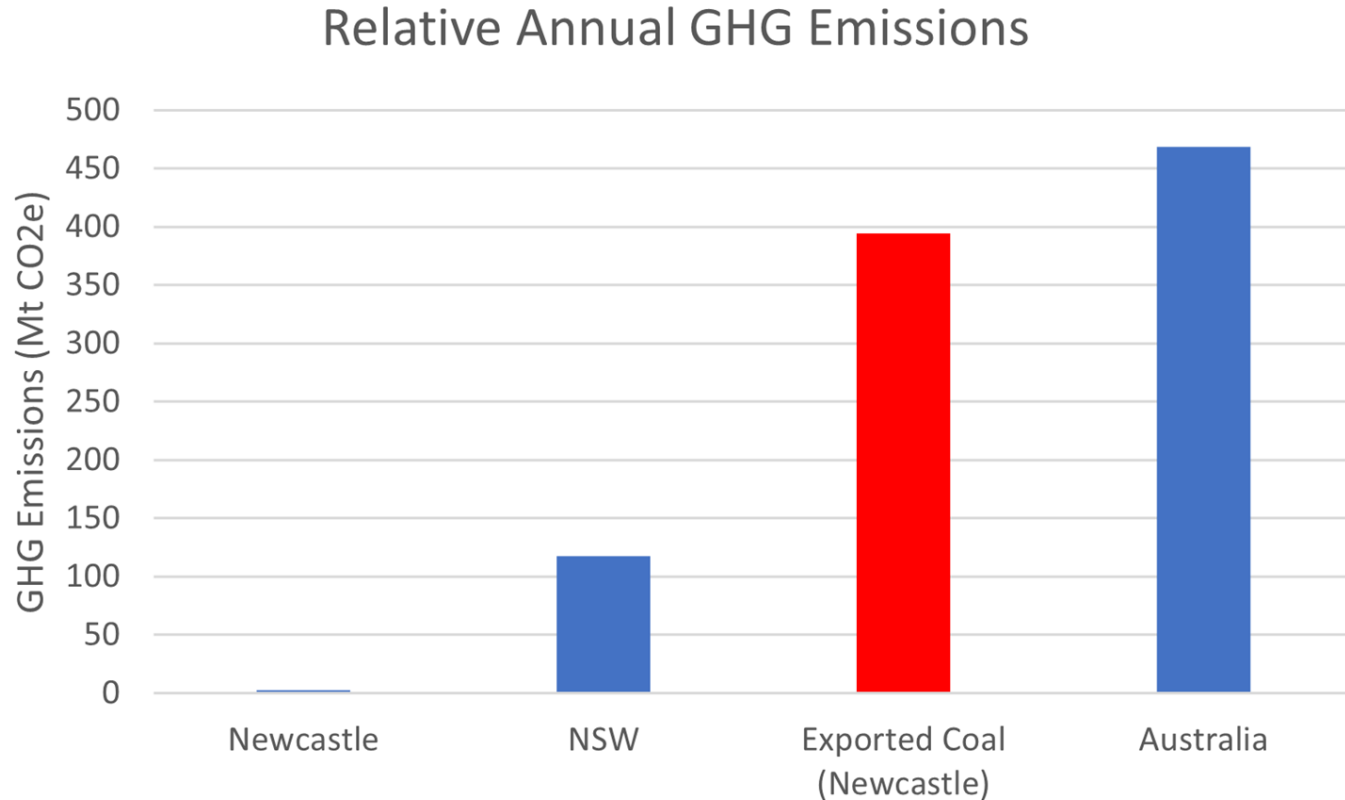
Post Summit

- Finalise Emission Reduction Plan
- Implementation Monitoring and Review
- Newcastle Emission Reduction Charter & Alliance

With emission reduction, count what doesn't get counted

- Cruises
- Domestic Aviation
- International Travel - Flying
- Shipping Freight
- Scope 3 Emissions

Scope 3 Emissions - Exported Coal



(Roberts, 2023c)

Questions?

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