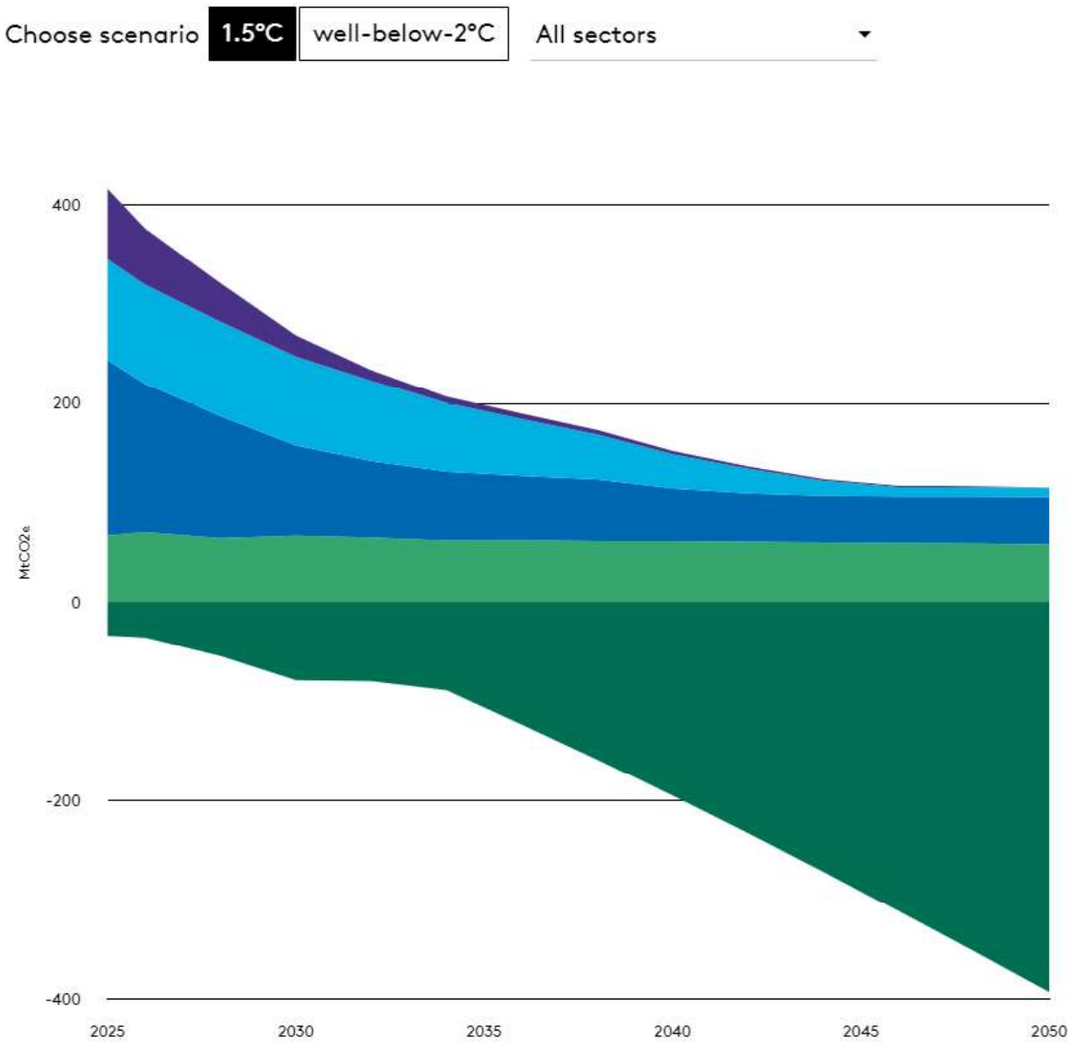
Six Capitals consulting

The need for speed

10 critical years of transition in the built environment

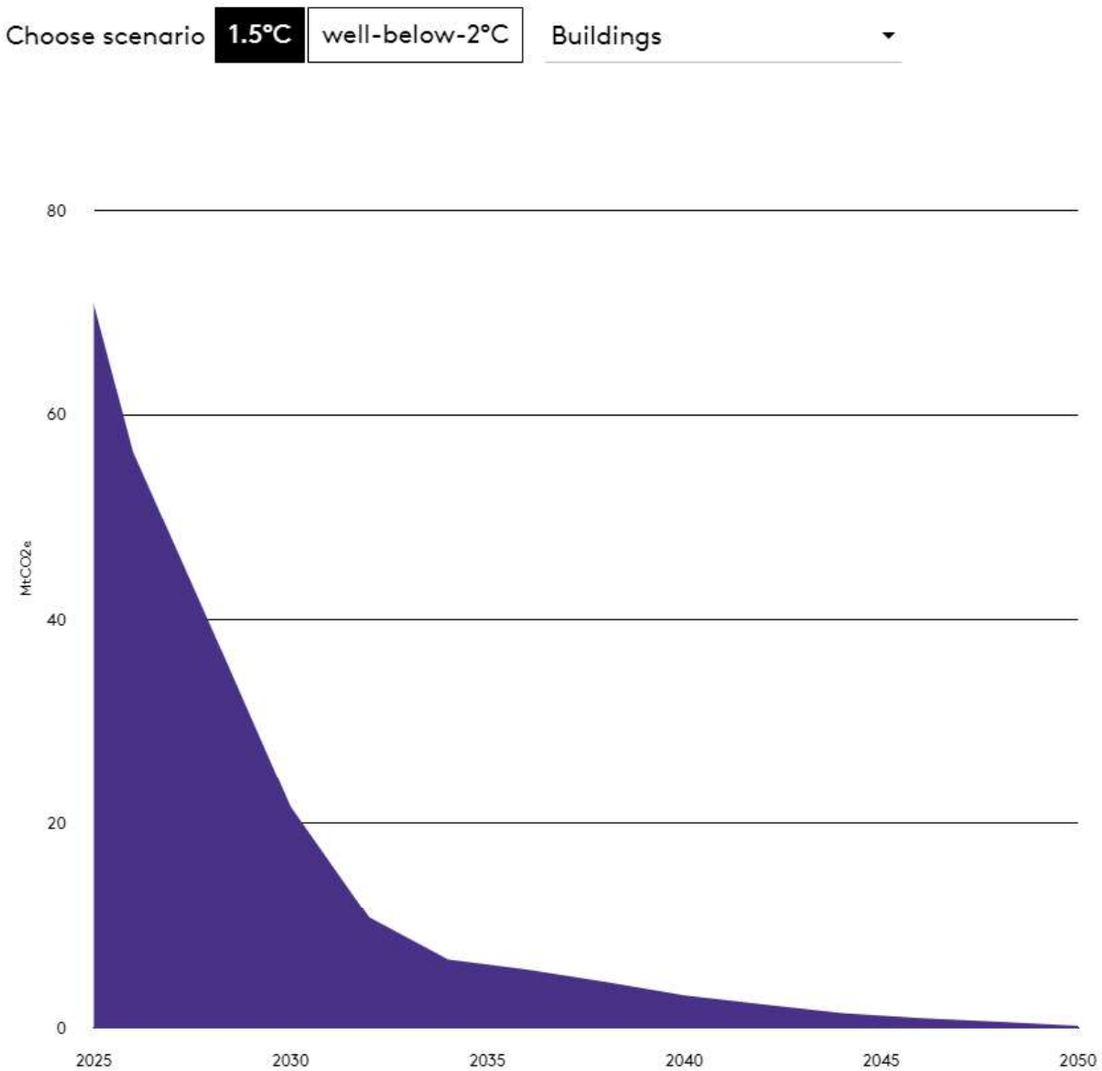
Bruce Precious
Principal Consultant
Six Capitals Consulting

Net Zero 2050



https://www.climateworkscentre.org/resource/climateworks-centre-decarbonisation-scenarios-2023-australia-can-still-meet-the-paris-agreement/

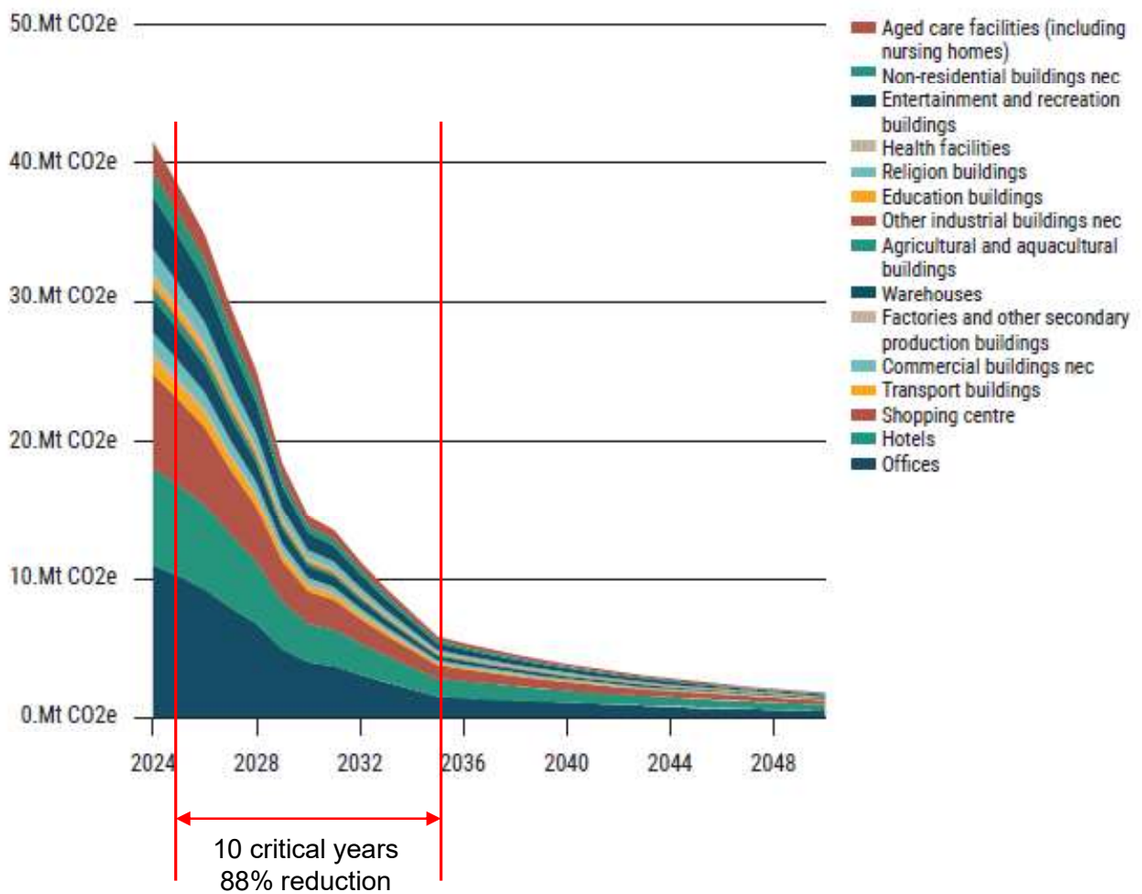
Built environment



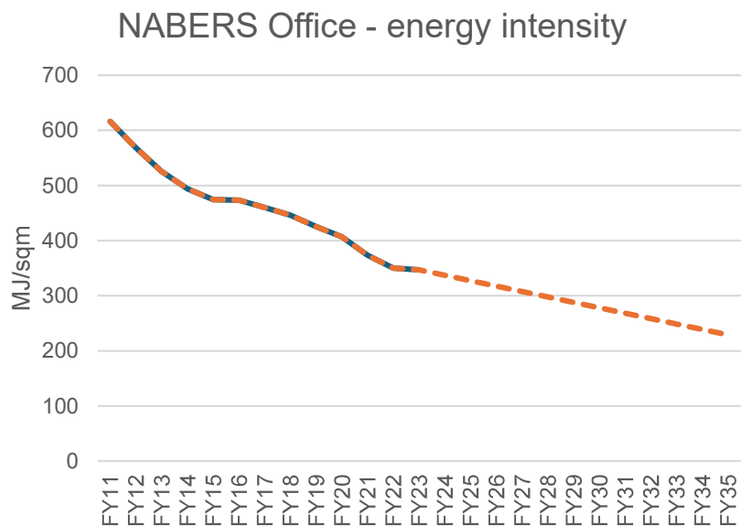
https://www.climateworkscentre.org/resource/climateworks-centre-decarbonisation-scenarios-2023-australia-can-still-meet-the-paris-agreement/

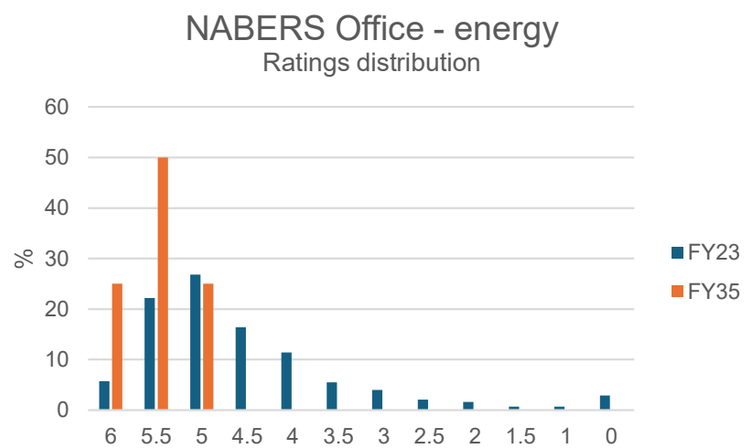
10 critical years

FIGURE 24:
Non-residential buildings sectoral emissions budget[89]

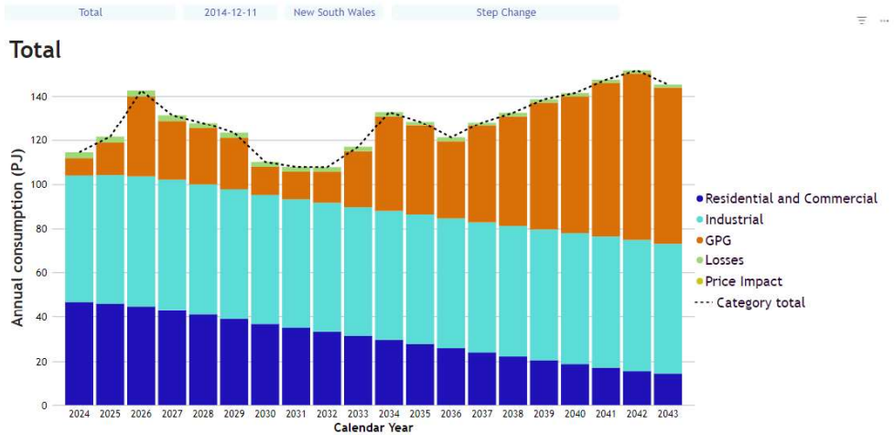


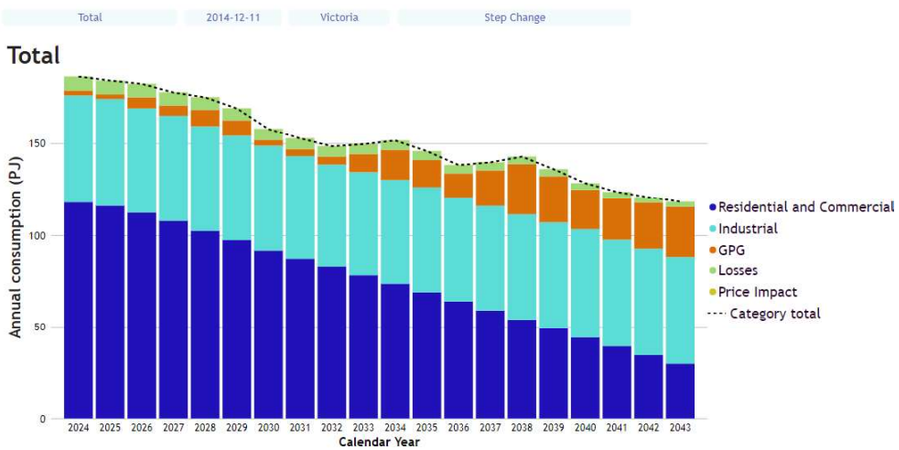
NABERS
(Office)





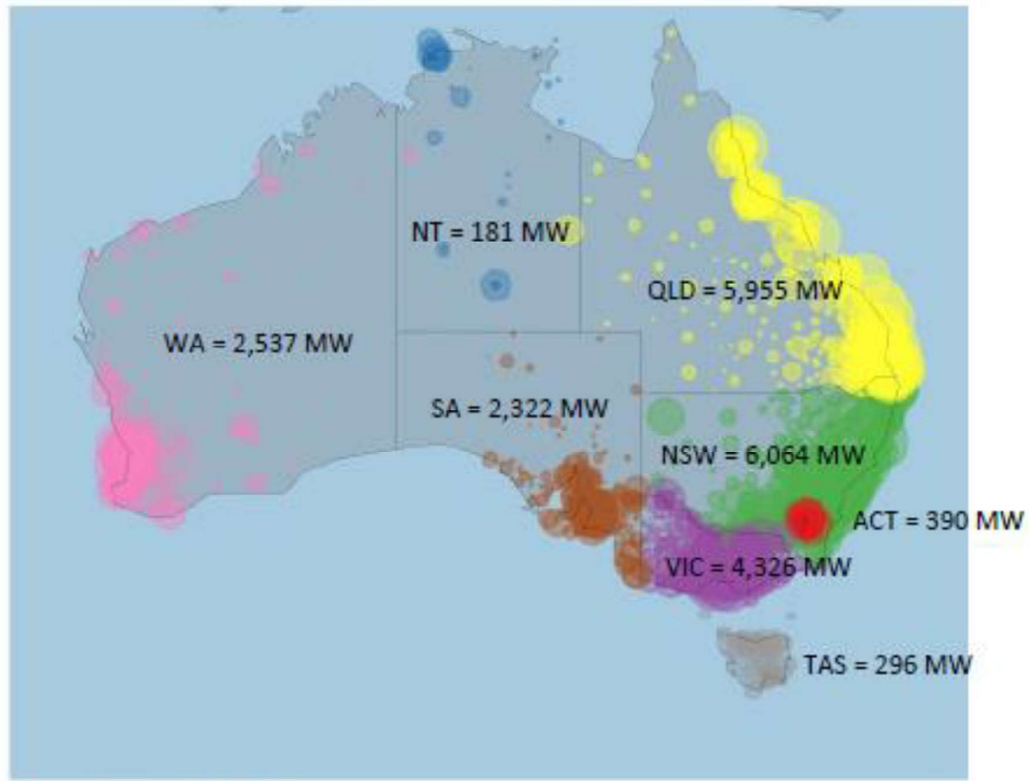
Natural gas in the built environment





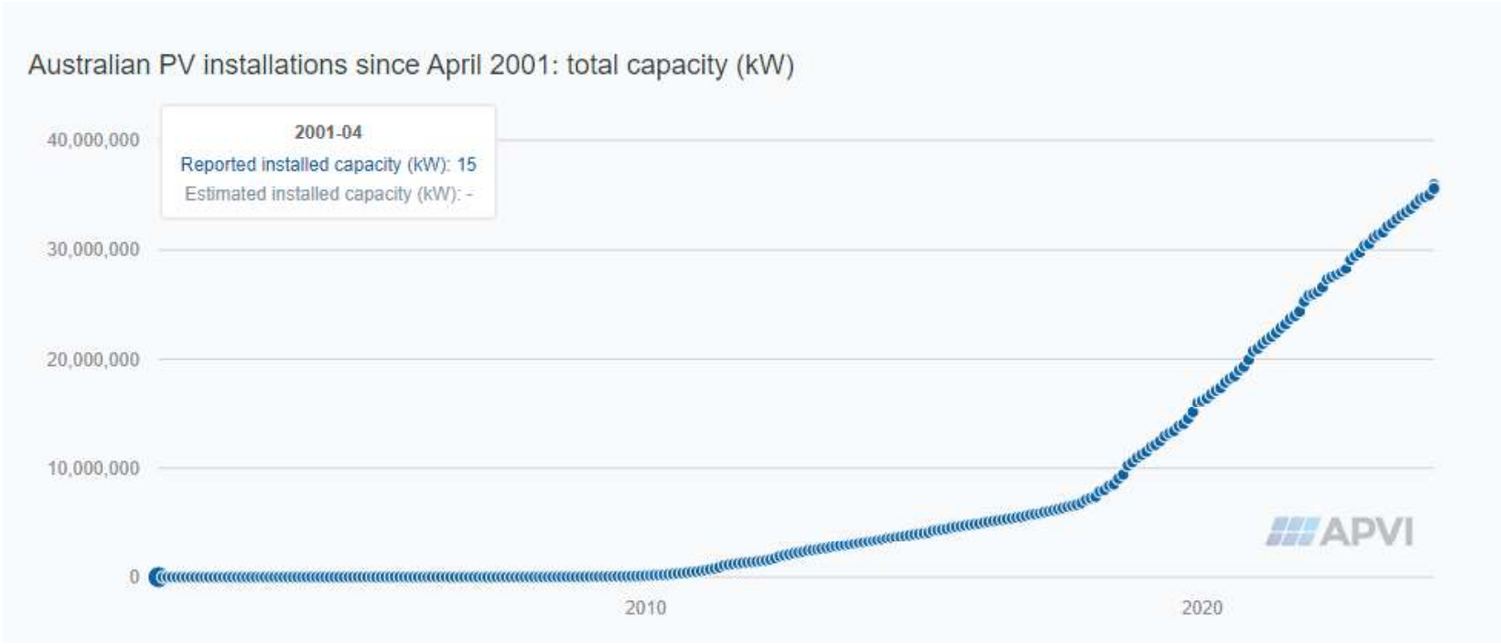
https://aemo.com.au/energy-systems/gas/gas-forecasting-and-planning/gas-forecasting-data-portal

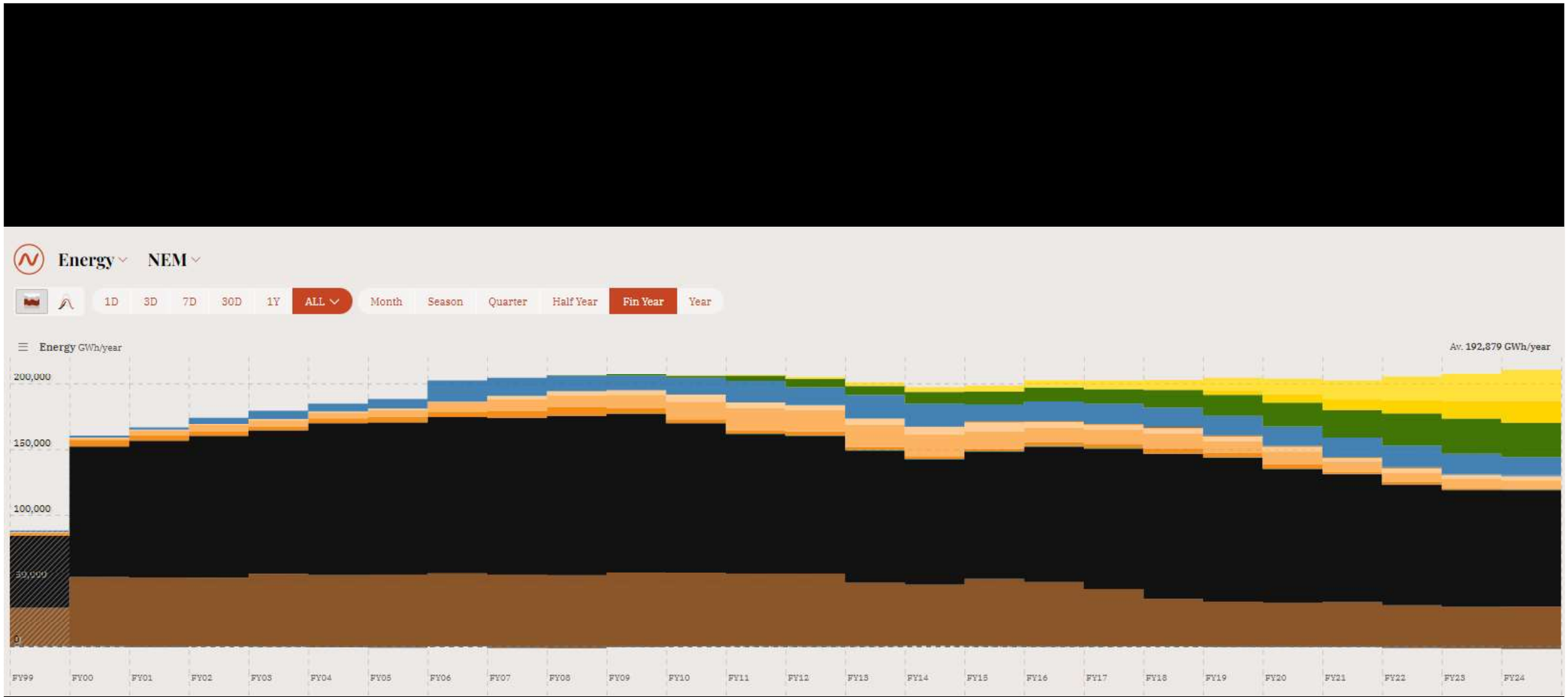
Solar contributes to the decline of gas



Source: AEC, 2024 with data from CER, 2024

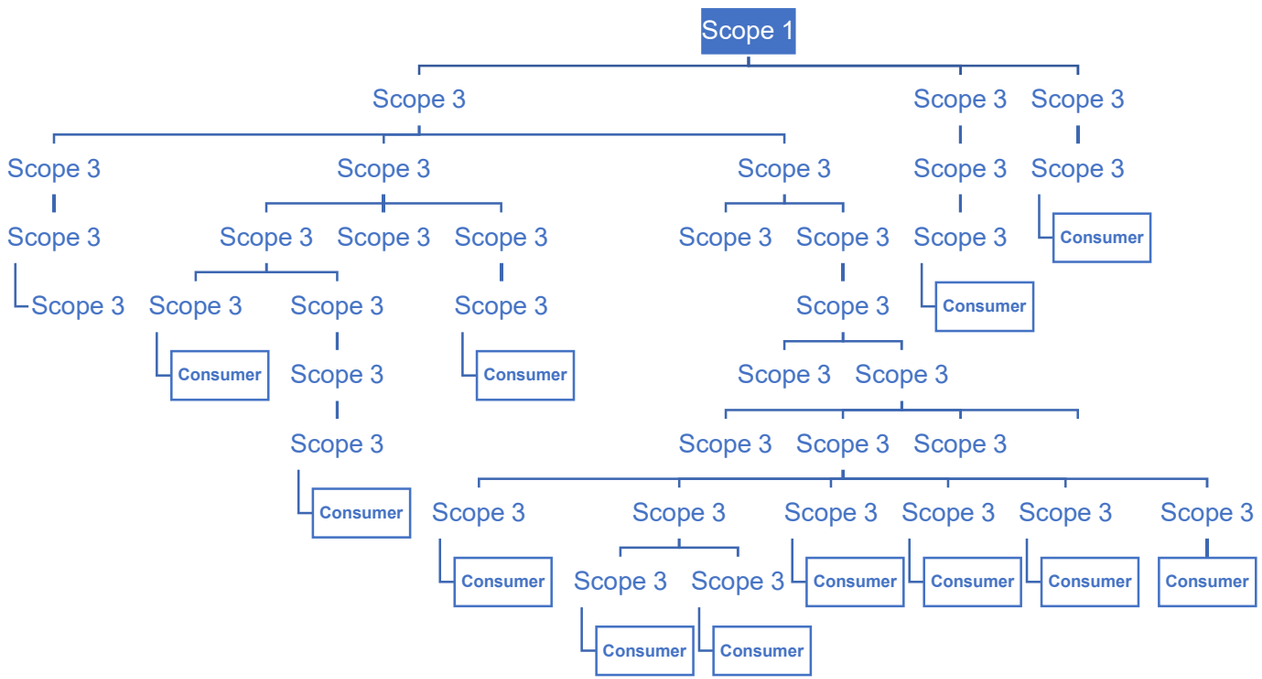
Solar contributes to the decline of gas



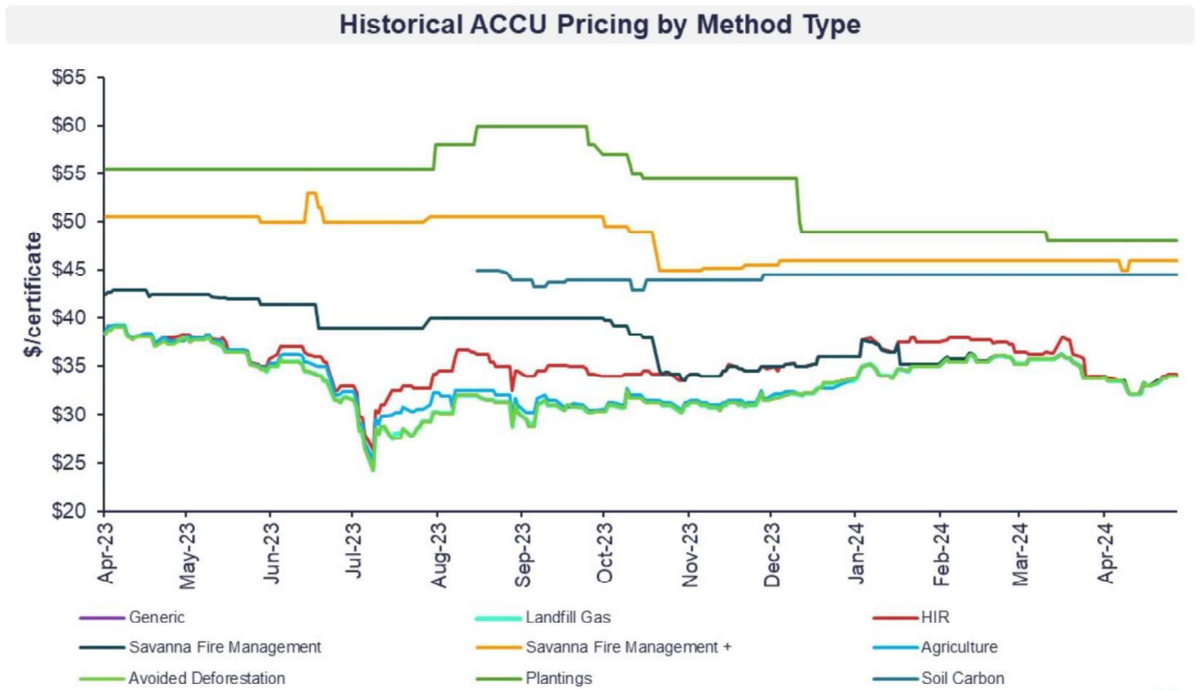


www.opennem.org.au

Scope 3 – supply chain emissions



Internalising a cost of carbon



CO2RE MARKETS

Internalising a cost of carbon

Table 1: Interim values of emissions reduction ($/tonne CO2-e)

Year	Average IPCC & ACCU (using official IPCC) AUD2023	Year	Average IPCC & ACCU (using official IPCC) AUD2023
2023	66	2037	181
2024	70	2038	194
2025	75	2039	207
2026	80	2040	221
2027	84	2041	236
2028	89	2042	252
2029	95	2043	268
2030	105	2044	286
2031	114	2045	305
2032	124	2046	325
2033	135	2047	346
2034	146	2048	369
2035	157	2049	393
2036	169	2050	420

This guidance will continue to apply unless we vary or revoke it.

“Valuing emissions reduction: AER draft guidance” March 2024

Technical note to NSW Government Guide to Cost-Benefit Analysis TPG23-08

Internalising a cost of carbon

Carbon emissions value for the purpose of preparing a CBA

Table 1 shows carbon emissions values for the purpose of preparing a CBA. Values (in 2022 dollars) are calculated using the method set out below for all years from 2023 onwards. These values will be update biannually.

Table 1: AUD Carbon emissions value (per tonne) for the purpose of preparing a CBA (in 2022 dollars)

FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032
$123	$126	$128	$131	$134	$137	$140	$144	$147	$150

“Valuing emissions reduction: AER draft guidance” March 2024

Technical note to NSW Government Guide to Cost-Benefit Analysis TPG23-08

Internalising a cost of carbon

Table 1 – Recommended carbon values per tCO_2-e emissions (AUD $2023)

Year	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032
Low	44	56	62	69	76	87	107	124	144
Central	56	66	76	88	104	123	148	171	192
High	66	77	95	107	132	152	180	210	227

Year	FY2033	FY2034	FY2035	FY2036	FY2037	FY2038	FY2039	FY2040	FY2041
Low	159	166	172	184	191	193	206	210	212
Central	209	222	234	244	254	264	273	282	291
High	258	262	280	293	308	319	329	340	351

Year	FY2042	FY2043	FY2044	FY2045	FY2046	FY2047	FY2048	FY2049	FY2050
Low	215	228	246	267	272	274	276	284	287
Central	300	309	318	326	335	344	354	363	377
High	361	370	375	380	403	421	429	437	469

https://www.infrastructureaustralia.gov.au/publications/valuing-emissions-economic-analysis

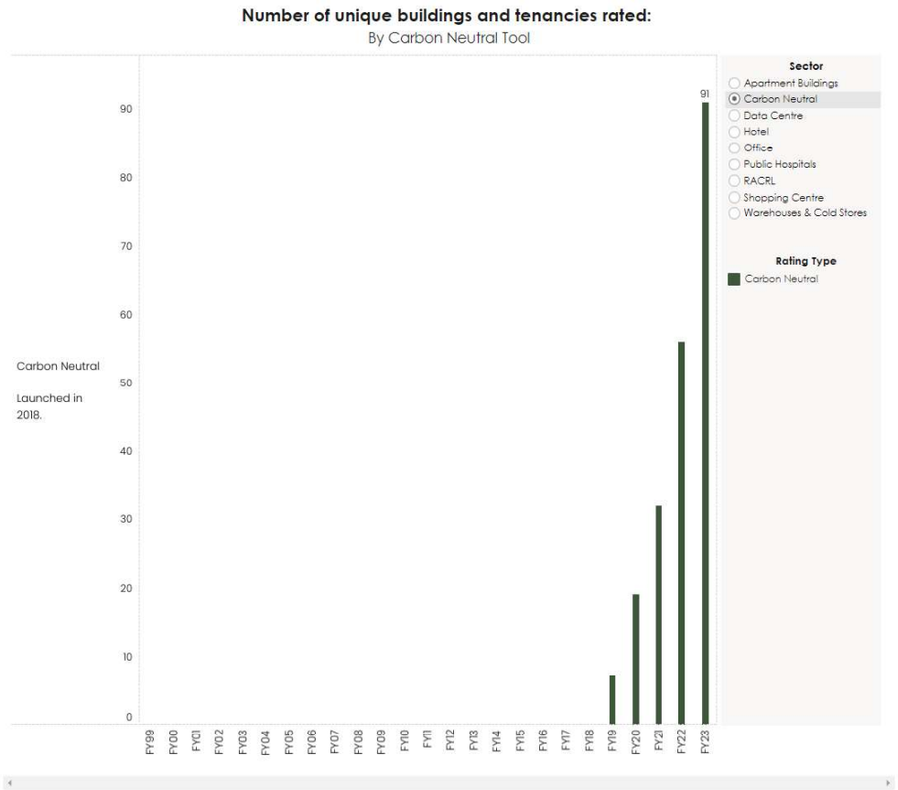
Tools

- Energy efficiency
  - NABERS – all building types
  - CBD – expand disclosure to other buildings types
  - Electrification – heat pumps incentives
  - NCC updates
  - Cost of carbon – enhanced business cases
- Renewable electricity
  - Cheaper solar
  - Cheaper batteries
  - Thermal storage
  - Flexible demand systems
- Embodied emissions
  - NABERS Embodied Emissions Database
  - Cost of carbon – making the business case
- Electrification
  - Heat pump incentives
  - Better Building Partnership - guides

Tools

- Climate Active – carbon neutral standards

Life of Program Statistics



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Thank you !