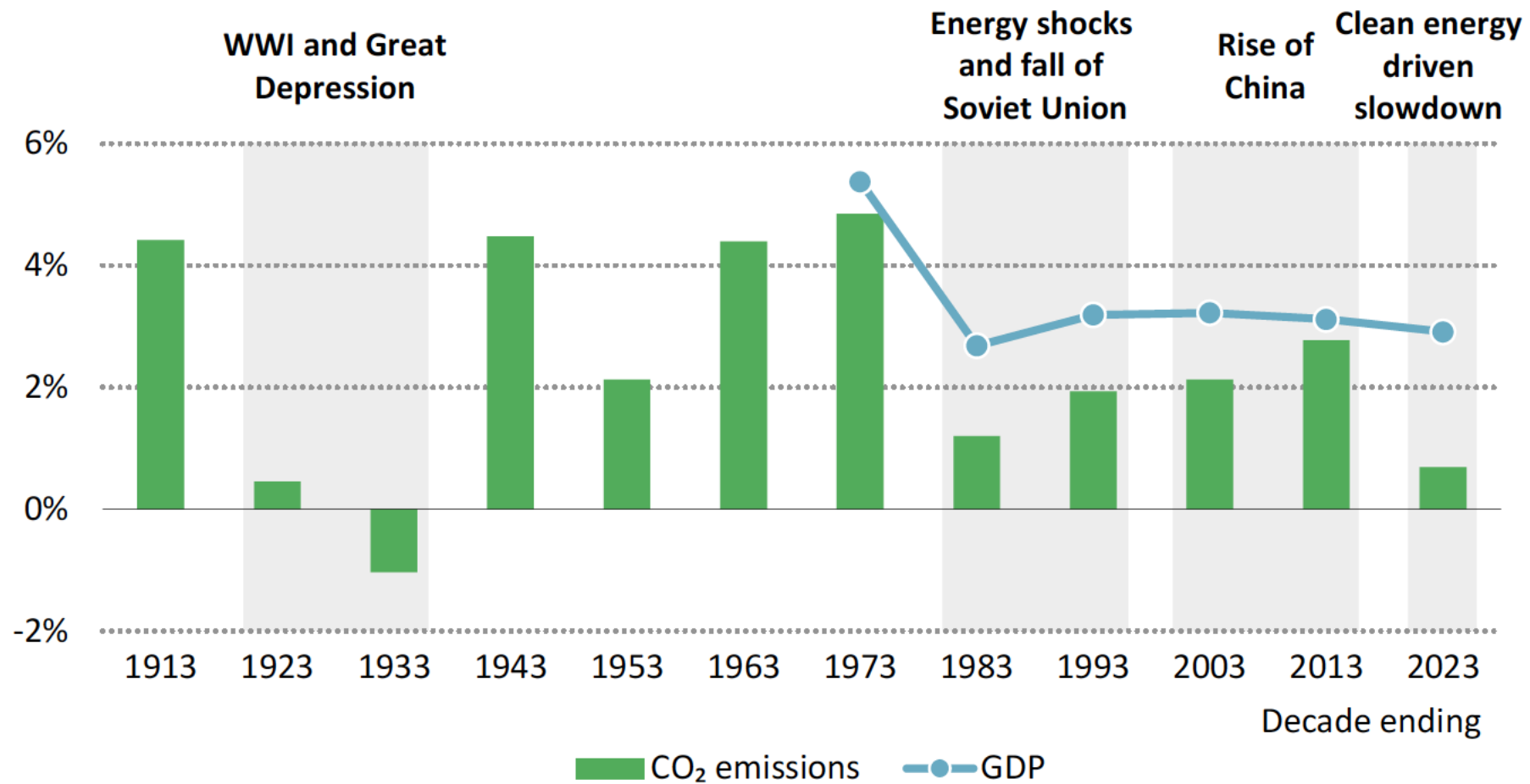


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Figure 2: Annual average rate of global CO₂ emissions and GDP growth by decade, 1903-2023

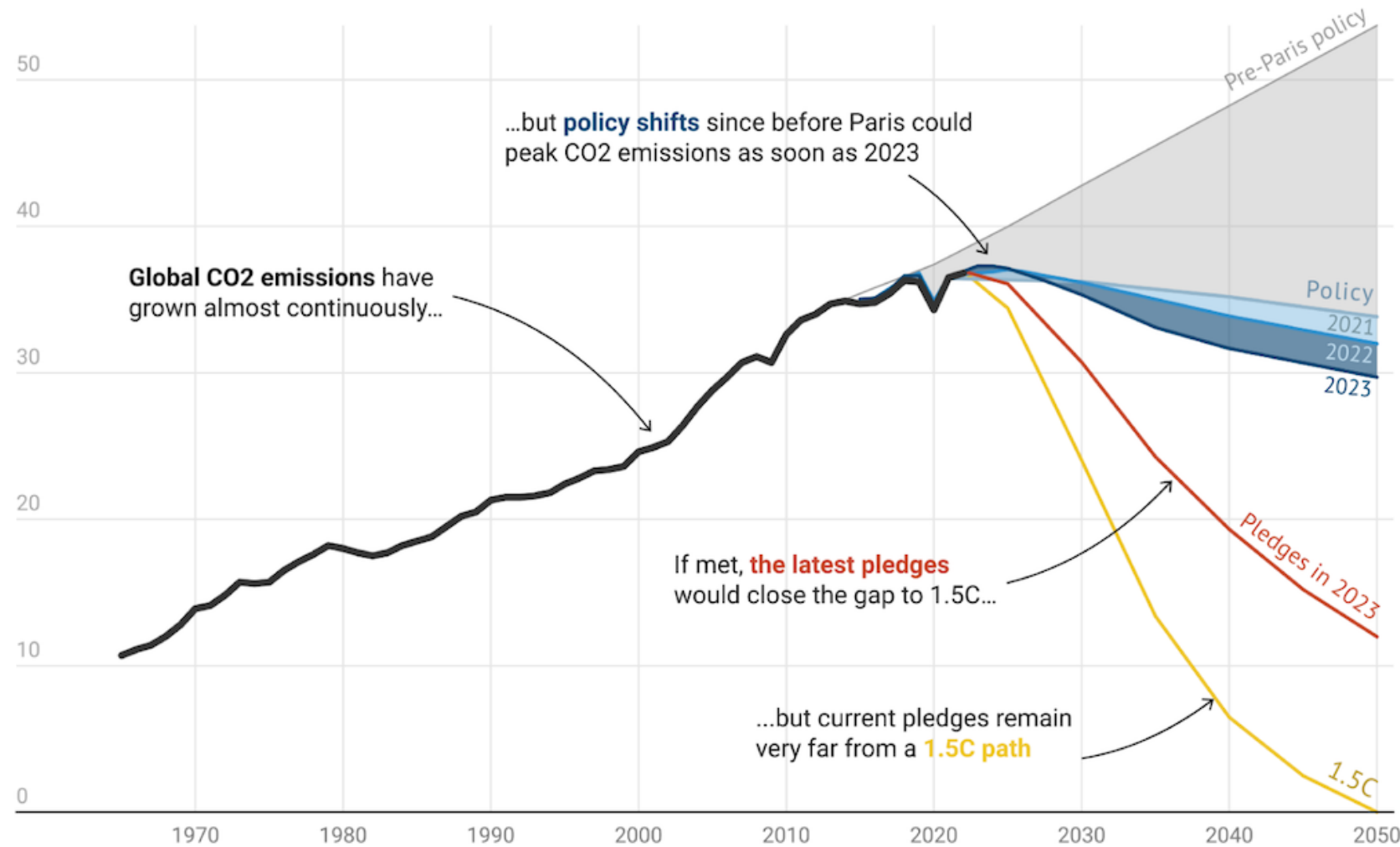


IEA. CC BY 4.0.



IEA existing policies scenarios of different vintages

Global energy-related CO2 emissions, billion tonnes



Source: IEA World Energy Outlooks



The unit costs of some forms of renewable energy and of batteries for passenger EVs have fallen, and their use continues to rise.

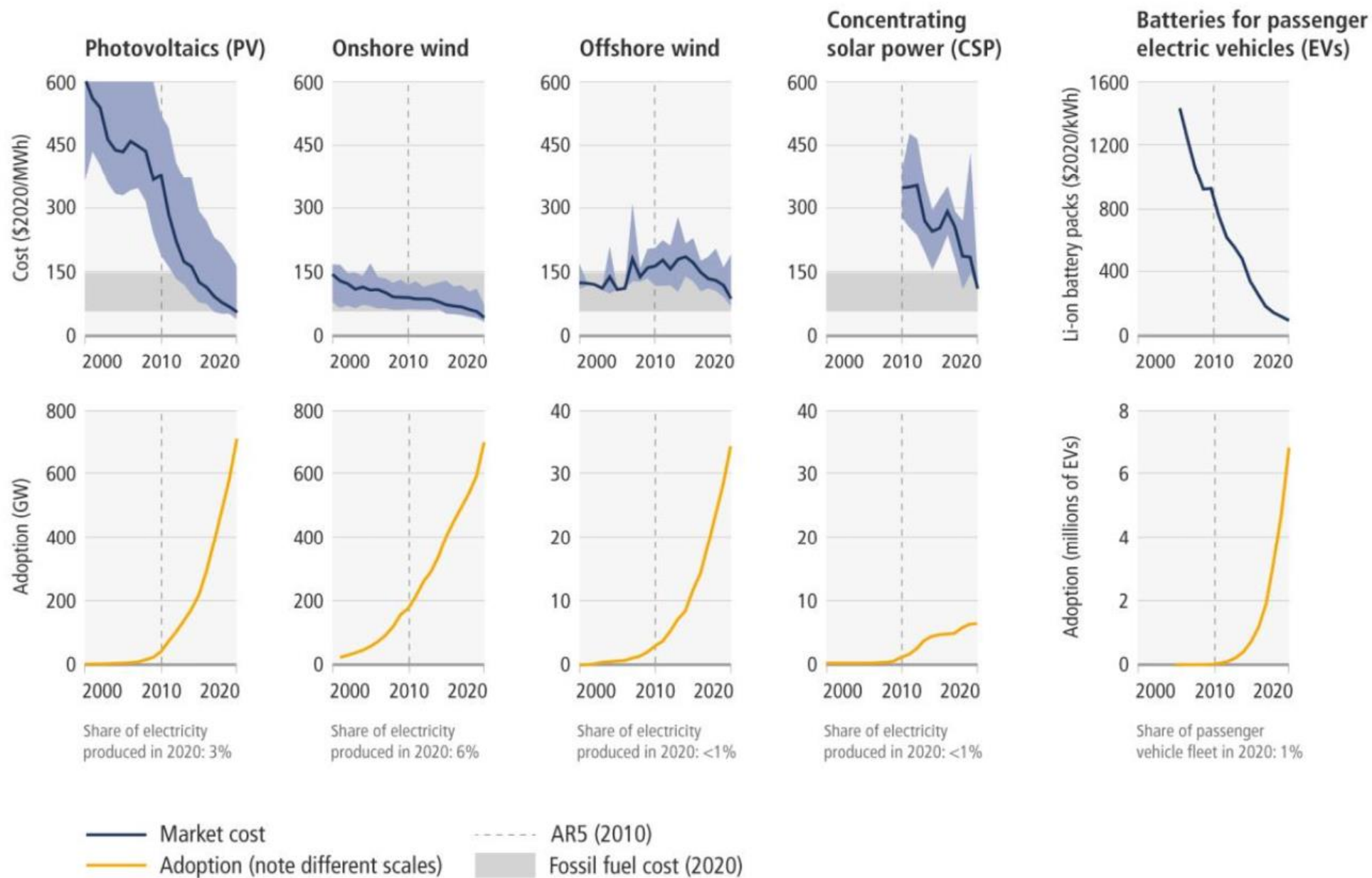
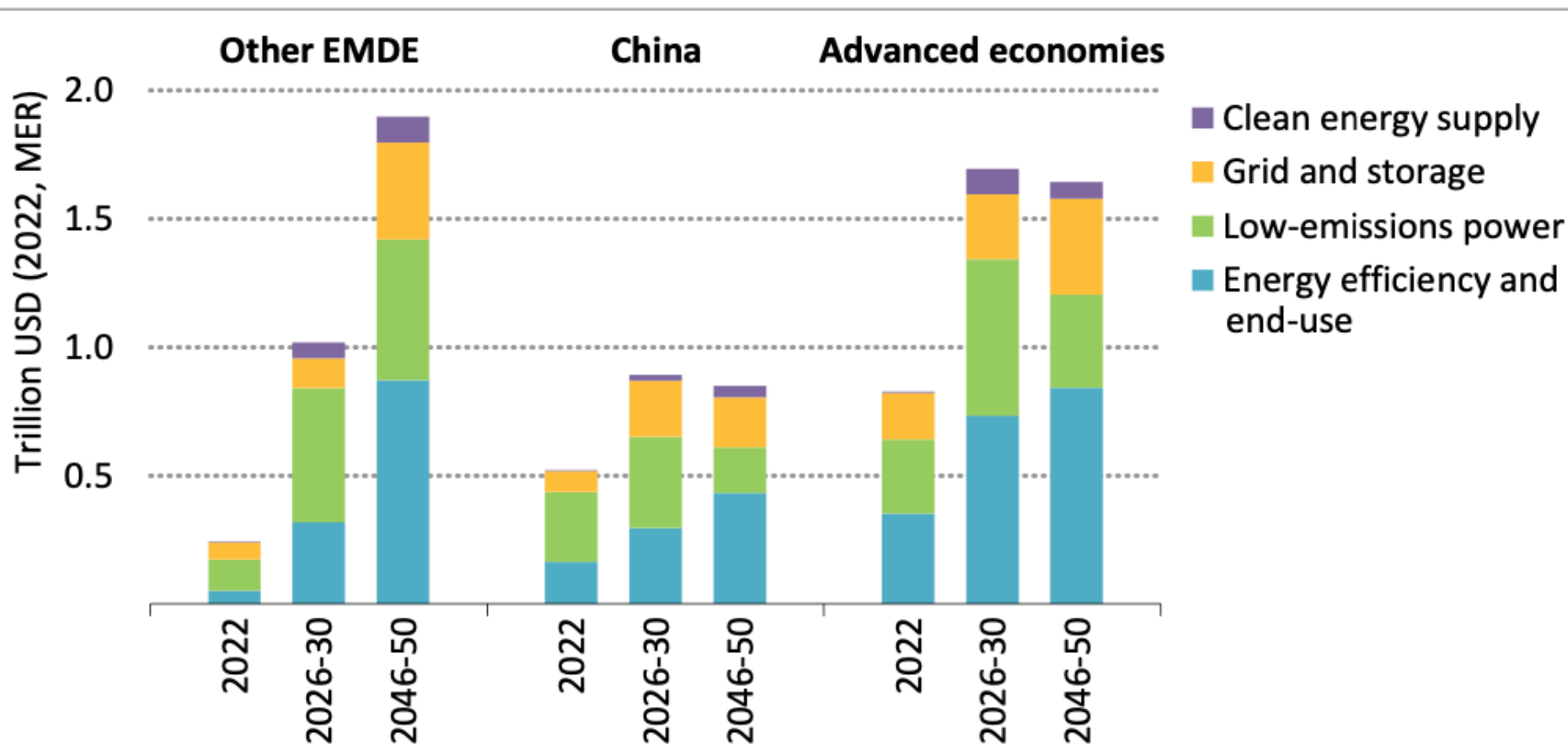
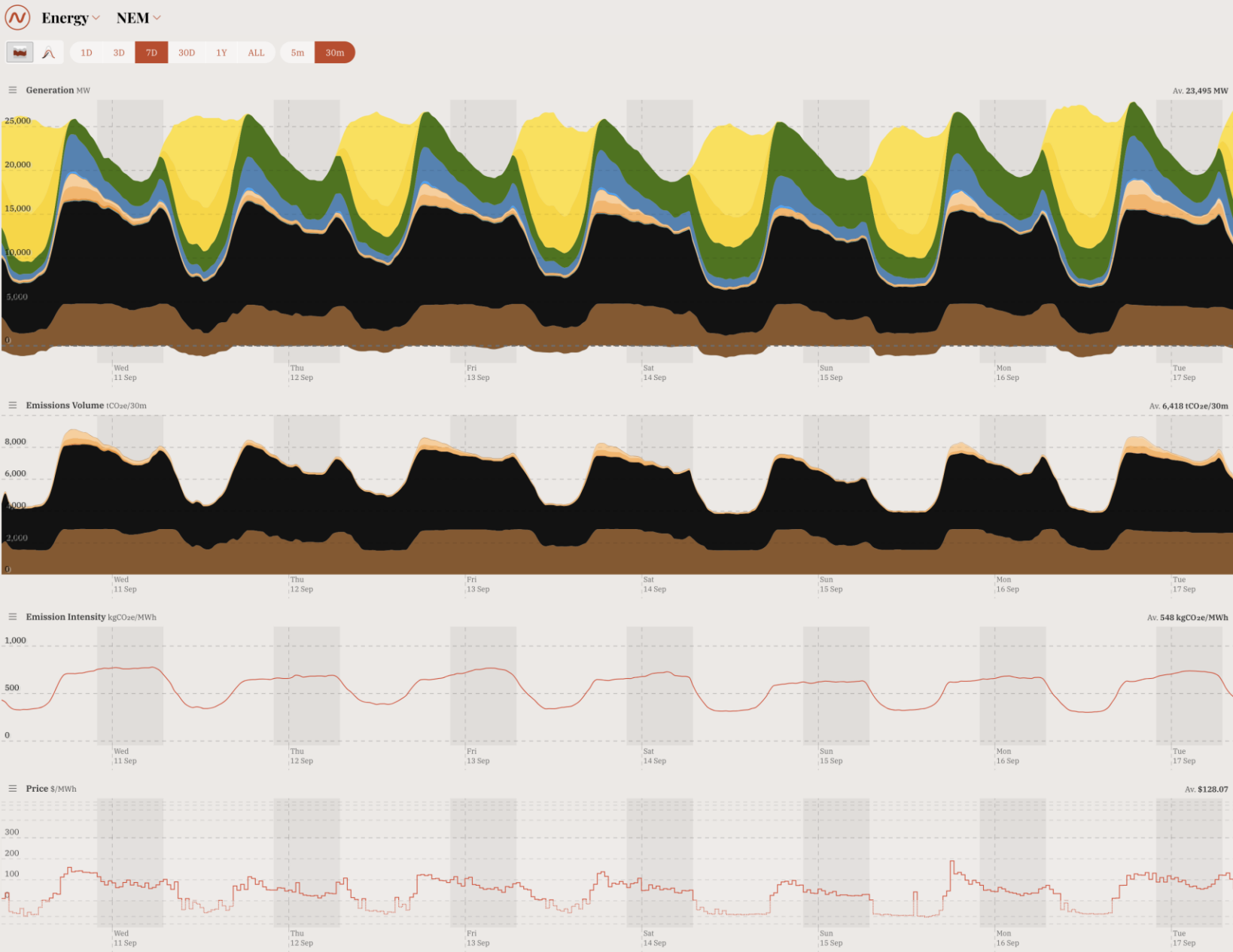


Figure 1.18 ▶ Average annual clean energy investment needs by region/country in the NZE Scenario, 2022-2050



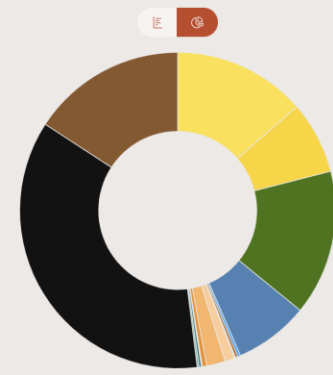
Electricity generation mix, last 7 days

Source: AEMO via OpenNEM. opennem.org



10 Sep 2024, 9:00 AM – 17 Sep 2024, 9:00 AM AEST

Source	Energy (GWh)	Contribution to demand	Av. Value (\$/MWh)
Solar (Rooftop)	546	13.6%	-\$13.34
Solar (Utility)	294	7.4%	-\$3.94
Wind	601	15.0%	\$42.79
Hydro	306	7.6%	\$64.53
Battery (Discharging)	8.1	0.2%	\$89.62
Gas (Waste Coal Mine)	6.9	0.2%	\$40.87
Gas (Reciprocating)	1.6	0.04%	\$104.34
Gas (OCGT)	37	0.9%	\$91.94
Gas (CCGT)	74	1.9%	\$74.00
Gas (Steam)	15.2	0.4%	\$46.07
Distillate	0.3	0.008%	\$119.21
Bioenergy (Biomass)	6.6	0.2%	\$47.31
Bioenergy (Biogas)	4.4	0.1%	\$40.33
Coal (Black)	1,462	36.5%	\$50.39
Coal (Brown)	638	15.9%	\$50.32
Loads	57		
Pumps	47	1.2%	-\$18.34
Battery (Charging)	10.2	0.3%	\$3.64
Net	4,059		
Renewables	1,767	44.0%	



10 Sep 2024, 9:00 AM – 17 Sep 2024, 9:00 AM AEST

STATS	Min.	Max.
Demand MW	18,634 MW 14 Sep 2024, 4:00 AM	27,794 MW 16 Sep 2024, 7:00 PM
Renewables %	21.5% 10 Sep 2024, 10:30 PM	71.1% 16 Sep 2024, 12:30 PM
Price \$/MWh	-\$74.76 15 Sep 2024, 2:30 PM	\$187.90 15 Sep 2024, 6:00 PM

Thank you

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