

**How and when we might get energy prices back to some level of normal.**

**Vernier Society Lunchtime Talk**

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14 July 2022

Kooyong Tennis Club, Melbourne



**Victoria  
Energy Policy  
Centre**



**VICTORIA  
UNIVERSITY**

MELBOURNE AUSTRALIA

# Outline

1. **European gas and power markets**
2. **Australian gas, coal and power markets**
3. **Retail price impacts**
4. **How do these markets actually work?**
5. **Where next?**
6. **What should be done about it?**

# Lets start with spot gas in one the most traded hubs in Europe

UK NBP (p/therm) ▾

## Gas Spot Price

Source: Intercontinental Exchange, US Energy Information Administration, ERC E Estimates



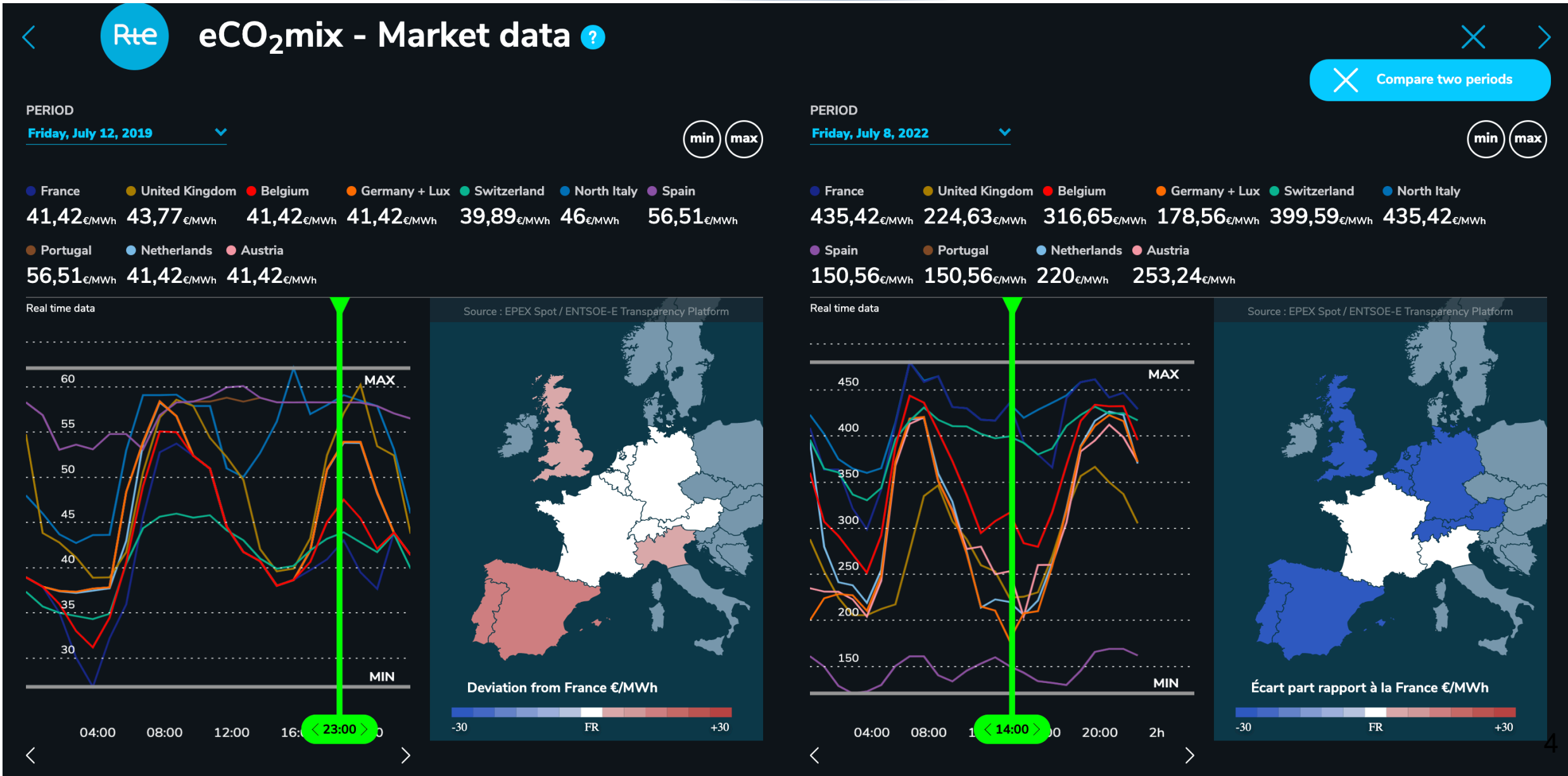
UK NBP (p/therm)

← Volatile, but  
~ 4X since  
Russian  
invasion

← Russia invades Ukraine



# And in spot power markets we see 3X to 10X comparing July Fridays in 2019 and 2022



# European gas forward markets anticipated sharply higher prices even before invasion of Ukraine. What was going on?

<https://www.ofgem.gov.uk/wholesale-market-indicators>

Gas Prices: Forward Delivery Contracts – Weekly Average (GB)

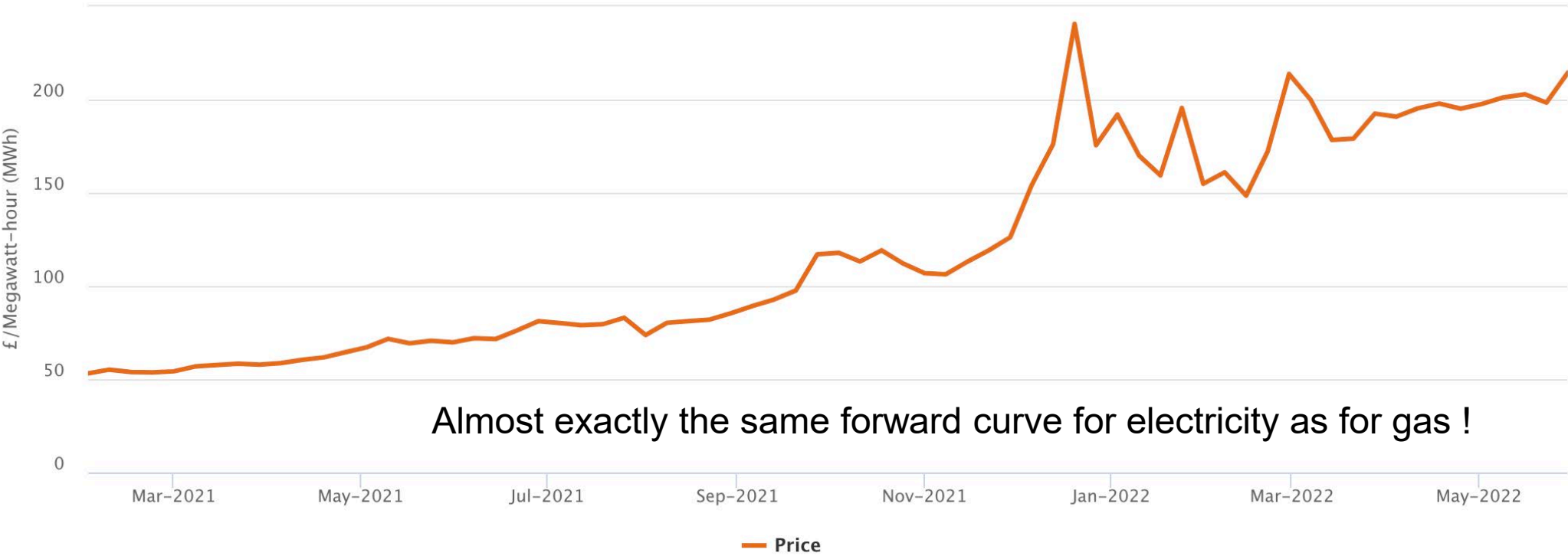


Information correct as of: July 2022

Russia invades Ukraine

# And look how this flows straight through into the British electricity market

Electricity Prices: Forward Delivery Contracts – Weekly Average (GB)



Almost exactly the same forward curve for electricity as for gas !

Information correct as of: July 2022



<https://www.ofgem.gov.uk/wholesale-market-indicators>

# And the forward markets are predicting an even worse picture soon

<https://www.theice.com/products/910/UK-Natural-Gas-Futures/data?marketId=5419494&span=3>

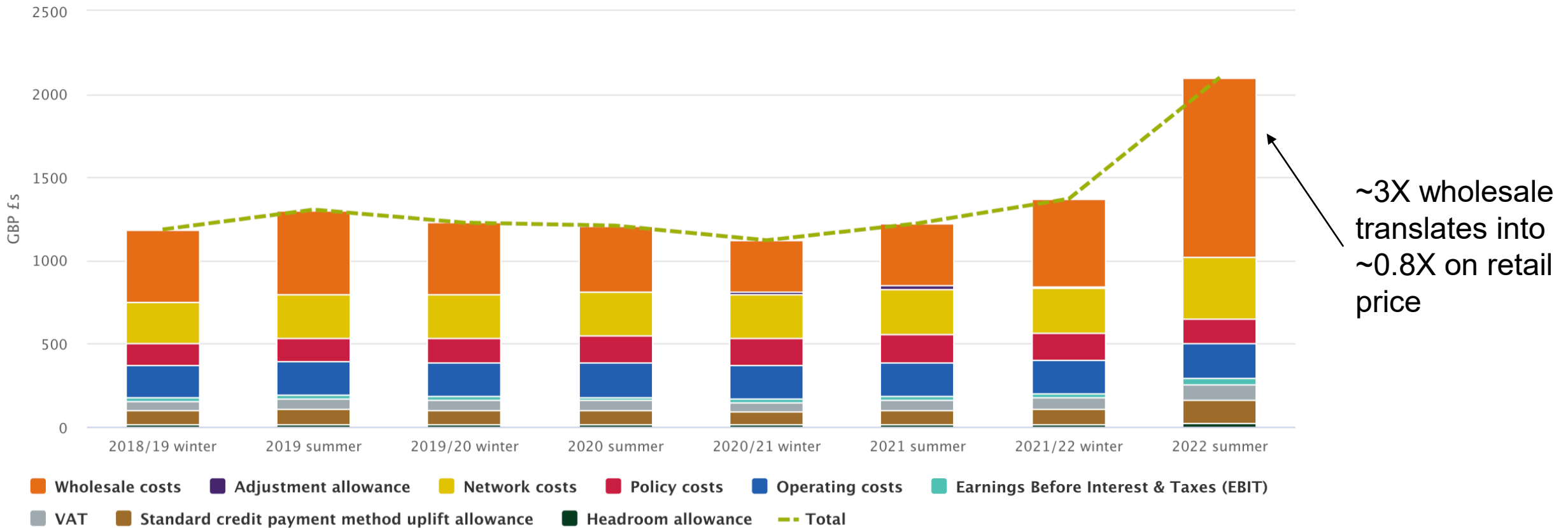
Energy | Natural Gas  
ICE Futures Europe  
**UK Natural Gas Futures**

CONTRACT	LAST
AUG22	257.000
SEP22	343.500
OCT22	396.950
NOV22	448.680
Q4 22	436.000
DEC22	460.130
JAN23	458.000
FEB23	
WINTER22	440.000
Q1 23	441.850
MAR23	410.000
APR23	
<b>MAY23</b>	

← Markets are expecting gas prices to roughly double by January 2023 from already bizarre levels!!

# Retail price impacts are dreadful. Half the retailers have already failed and the British Government has budgeted \$30bn to assist consumers

Breakdown of the default tariff price cap (GBP £, standard credit)





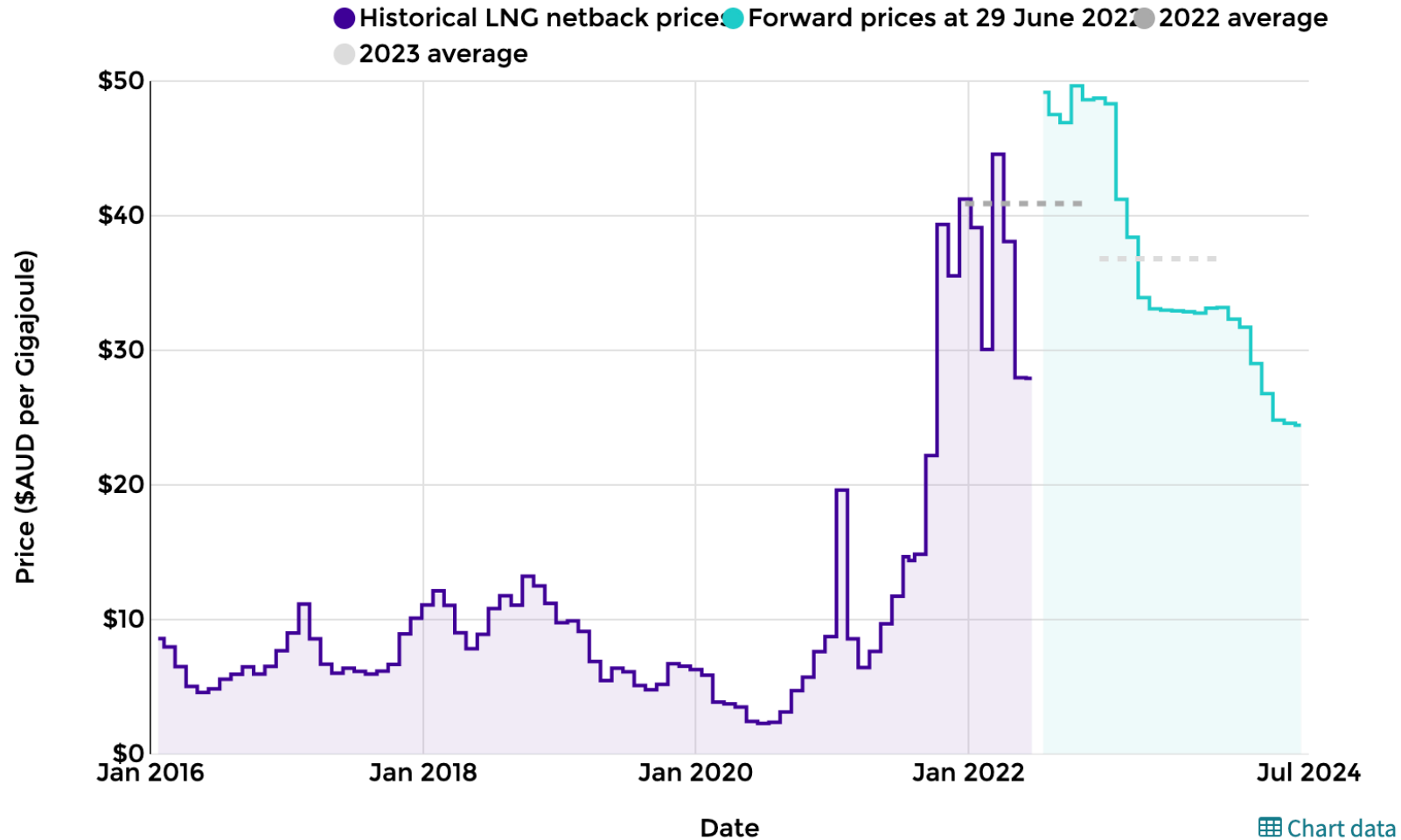
# And British retail expected to rise again by 0.65X taking total increase on 2019 levels to 2.5X

Latest predictions from analyst **Cornwall Insight** show that energy prices in October could shoot up by a whopping 65%, taking the average bill, based on typical use, to £3,244 when the latest cap comes into play – up from the current price cap of £1,971. That's a 9% increase from its previous prediction of £2,980 made in June.

And then in January 2023, the energy cap is predicted to go up by around another 4%, taking average prices based on typical use to £3,363 for the year. This is an increase of 12% from its previous prediction of £3,003.

These figures are based on average typical use and are predictions only, so what you end up paying will depend on how much you use and what the actual price cap will be when it is announced by **Ofgem**, the energy regulator, next month.

# Australia was the world's largest LNG exporter in 2021. Its no surprise European price effects shifted to Asia and Japan and then to us



# But unlike Europe we are also exposed to surging coal, driven first by post-covid expansion and then gas for coal substitution

Coal, Australian thermal coal Monthly Price - US Dollars per Metric Ton

Range 6m 1y 5y 10y 15y 20y 25y 30y

Jun 2012 - Jan 2022: 109.760 (125.89%)



**Description:** Coal (Australia), thermal GAR, f.o.b. piers, Newcastle/Port Kembla from 2002 onwards , 6,300 kcal/kg (11,340 btu/lb), less than 0.8% sulfur 13% ash; previously 6,667 kcal/kg (12,000 btu/lb), less than 1.0% sulfur, 14% ash

# Our markets are expecting huge wholesale price increase

## Base Quarters

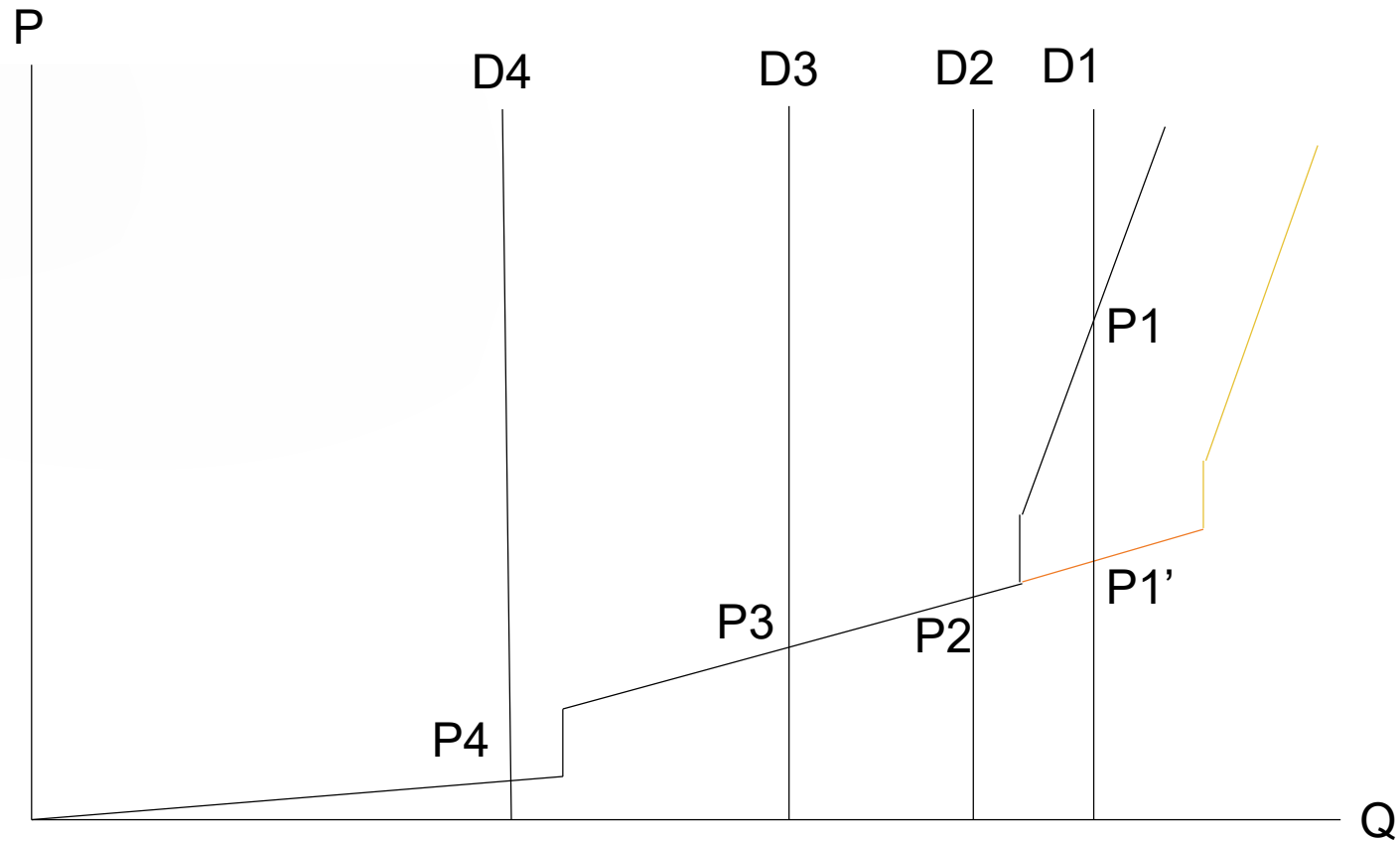
Contract	Week Close	Net Change	Traded Volume	Open Interest
NSW Base Q3 2022	\$311.00	-\$19.00	18	1447
VIC Base Q3 2022	\$273.95	-\$16.05	21	1993
QLD Base Q3 2022	\$305.00	-\$28.00	16	4367
SA Base Q3 2022	\$277.00	-	-	88
NSW Base Q4 2022	\$245.00	-\$11.50	10	1534
VIC Base Q4 2022	\$144.00	-\$9.00	8	1928
QLD Base Q4 2022	\$250.00	-\$10.00	27	4533
SA Base Q4 2022	\$161.96	-	-	89

## Cap Quarters

Contract	Week Close	Net Change	Traded Volume	Open Interest
NSW Caps Q3 2022	\$55.00	-\$21.00	12	1225
VIC Caps Q3 2022	\$36.50	-\$10.50	1	620
QLD Caps Q3 2022	\$64.00	-\$7.50	7	612
SA Caps Q3 2022	\$58.85	-	-	210
NSW Caps Q4 2022	\$52.00	-\$6.00	6	1106
VIC Caps Q4 2022	\$26.00	-\$1.50	3	432
QLD Caps Q4 2022	\$65.00	-\$5.00	25	593
SA Caps Q4 2022	\$33.79	-	-	105



# How do these markets actually work?



# Implications

- ▶ Half of retail suppliers in GB out of business.
- ▶ French Government renationalizing Electricite de France
- ▶ Spain (and most of Europe) introduced windfall tax on oil and gas and utilities suppliers
- ▶ British Government set aside \$30bn to assist customers to respond to crisis.
- ▶ German Government to bail out major gas supplier Uniper.
- ▶ Gas rationing likely across Europe for industrial customers
- ▶ Prospect of serious demand destruction in Europe and Australia

# What next?

- Gas: Russian invasion, Canadian and U.S. shales and coal seam methane?
- Coal: Russian invasion and hence European demand for sea-borne supply?
- Popular revolt and consequential policy support for rapid transition to renewables?
- Distributed supply (and storage) offers the only certain price hedge for consumers.
- “Solar battery bundles”
- Big developments in C&I solar and storage

# What should be done about it ?

- ▶ Focus bill relief on the least well-off.
- ▶ Do not subsidise utilities or dull marginal prices. Subsidise the end consumers.
- ▶ Get something for the public dollar wherever possible – not just relief of recurrent expenditure, but investment in new supply and storage.
- ▶ Speed up transition to renewables: storage and RE policy.
- ▶ Pick the (still plentiful) low-hanging fruit with distributed supply and developments that use main transmission network where excess capacity is available or will be soon.
- ▶ Ensure batteries are useful for expansion of transmission capacity, not just energy arbitrage
- ▶ The Commonwealth must see its role as a supportive of the States, not superceding them.