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RETAIL ELECTRICITY MARKETS UNDER STRESS

LESSONS LEARNT FOR THE FUTURE OF MARKET DESIGN IN EUROPE

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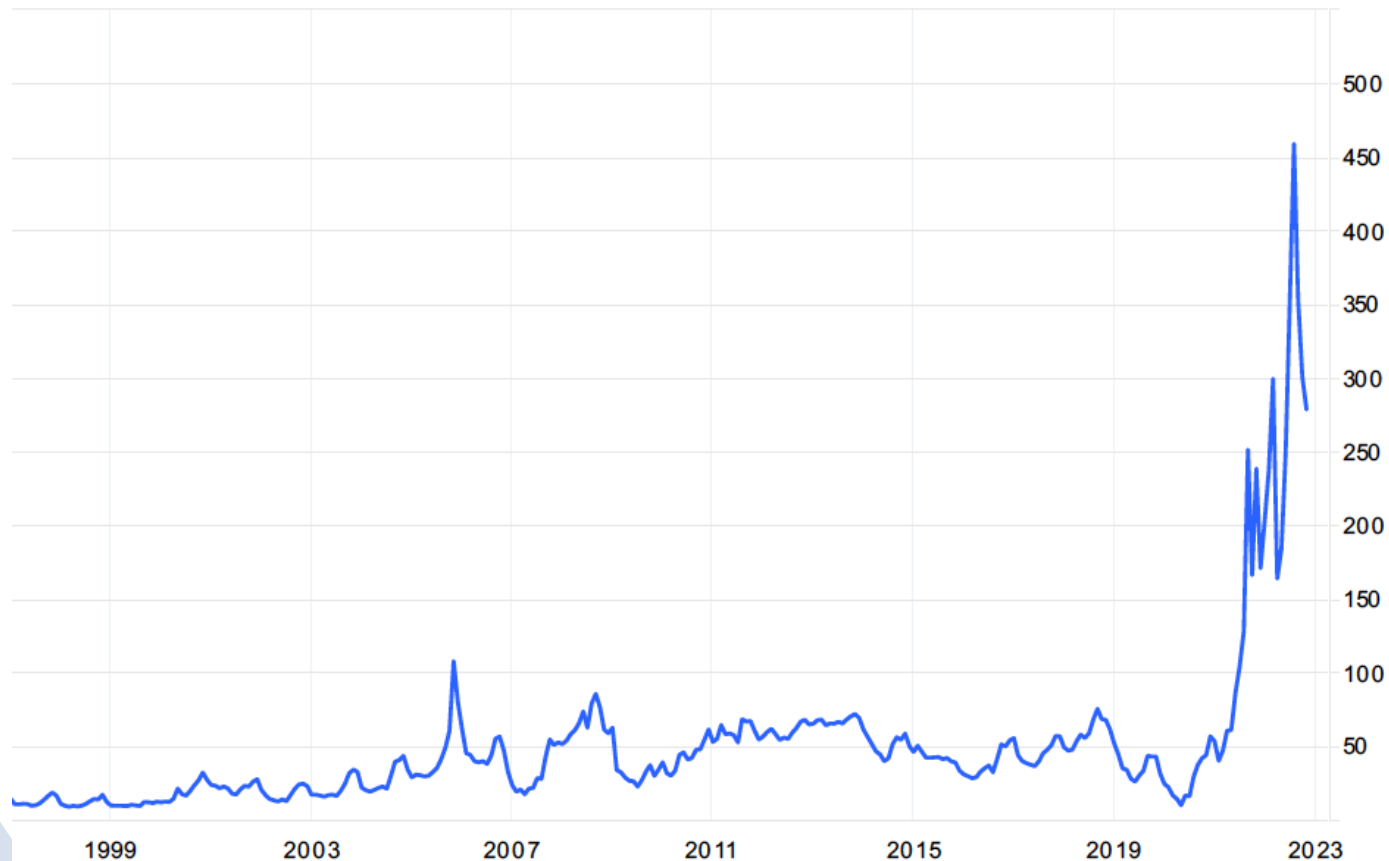
CEEM
Paris

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WHOLESALE NATURAL GAS PRICES ARE AT HISTORICALLY UNPRECEDENTED LEVELS

Natural Gas UK GBP



GBP pence per therm

In August 2021, 41% of residential gas bill was wholesale costs.

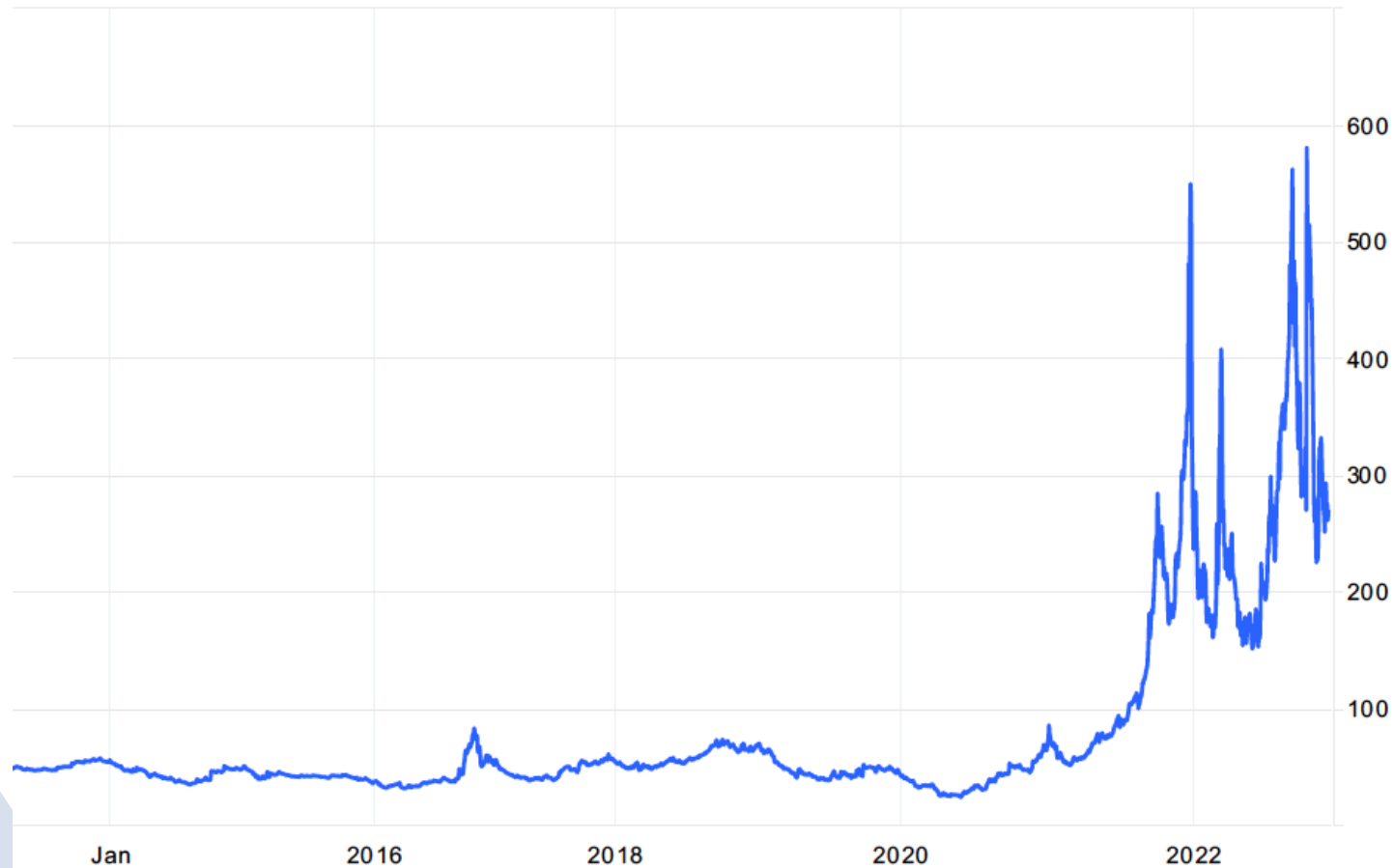
x 6 rise =
300% rise in
residential price

source: tradingeconomics.com



WHOLESALE ELECTRICITY PRICES ARE AT HISTORICALLY UNPRECEDENTED LEVELS

UK Electricity Spot Prices



GBP £ per MWh

In 2020/21, 34% of residential bill was wholesale cost.

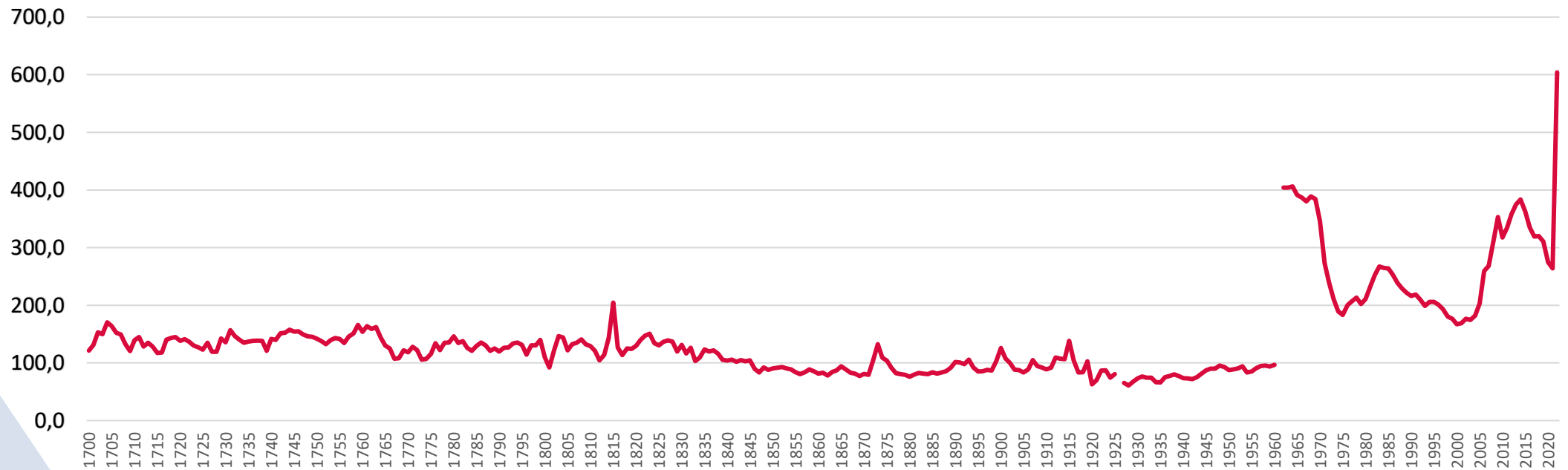
x 5 =

c. 250% rise in residential price



UK RETAIL HEATING FUEL PRICES ARE HIGHER THAN IN RECORDED HISTORY

Real price of heating fuel (per toe £2000)
Coal to 1960; Gas from 1960

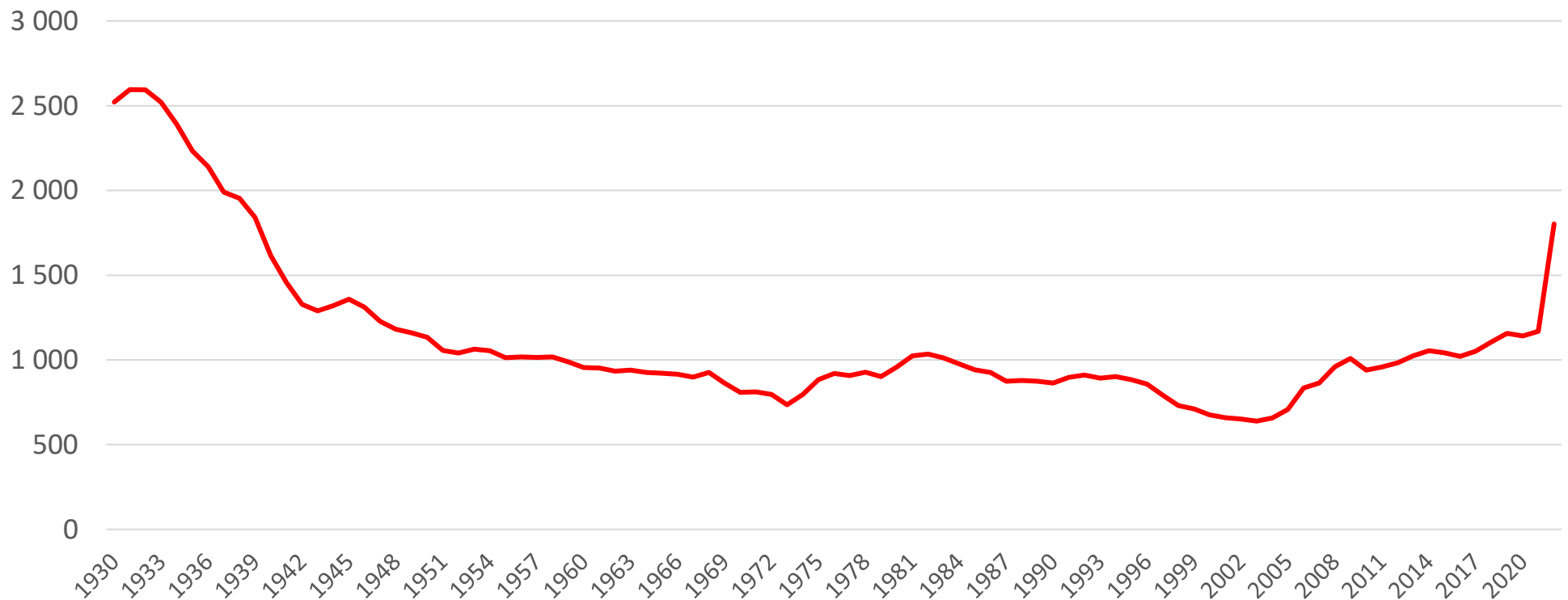


Source: Fouquet (2020), updated to October 2022 using ONS data



UK RETAIL PRICES ARE HIGHER THAN SINCE MASS ELECTRIFICATION BEGAN

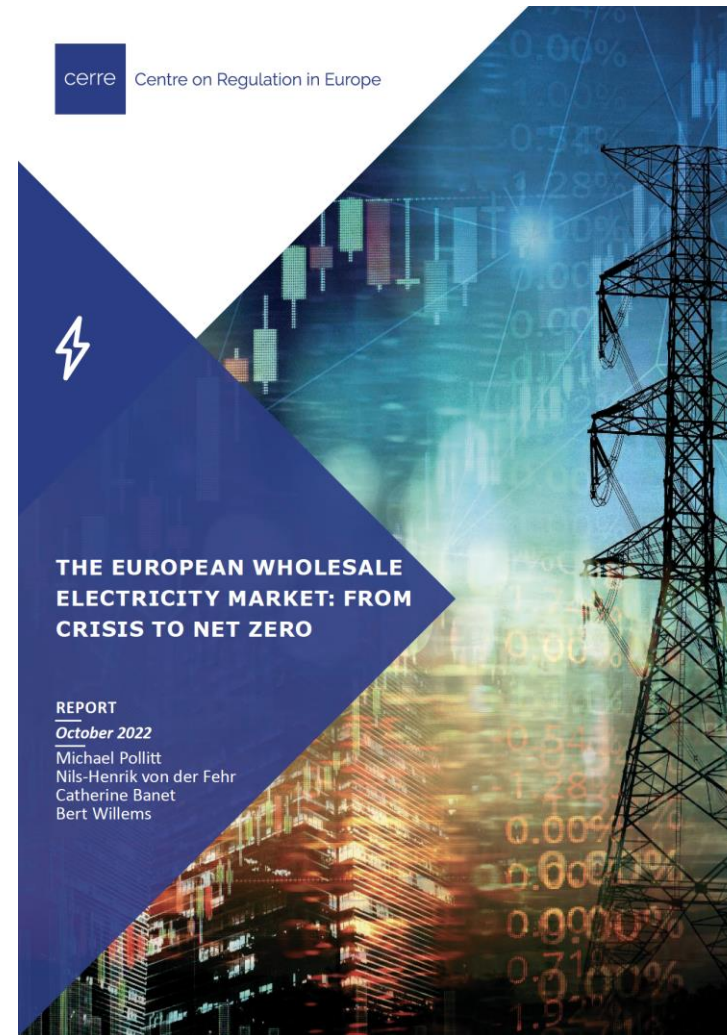
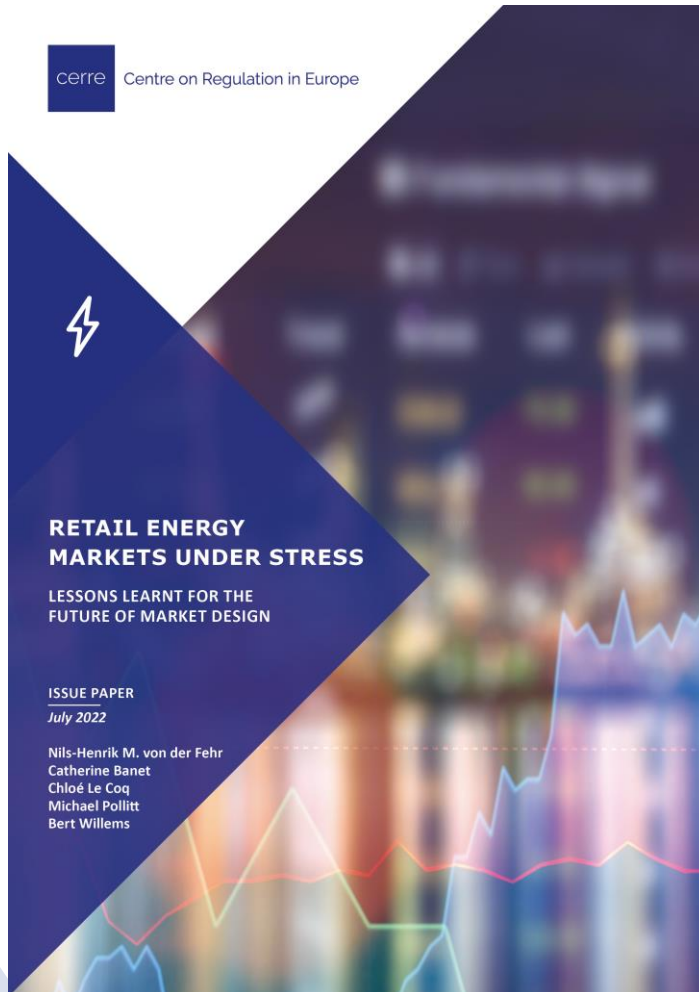
Real price of electricity (per toe £2000)



Source: Fouquet (2020), updated to October 2022 using ONS data



PAPERS ON ELECTRICITY MARKET DESIGN



Final integrated report will be Published on December 16.



RETAIL MARKETS: THE NEED FOR DESIRABLE CHANGE

- The recent unexpected higher energy prices have highlighted the challenges of designing well-performing retail markets. **More specifically, we want to facilitate behavioural change in energy consumption that increases energy efficiency and supports the energy transition.**
- A key priority in wartime is that retail customers do reduce their electricity and gas demand. Retail tariffs and behavioural interventions must reflect this. **All European countries need to engage in campaigns to reduce demand and have associated tariff settings which encourage large reductions in consumption for non-vulnerable customers.**
- Prosumers are to be encouraged to increase the use of photovoltaic panels, battery storage and electric heating system installation. **Large amounts of distributed installation can be done relatively quickly with beneficial aggregate demand and fiscal effects.**
- **Smart meters need to be used more effectively in an energy crisis to ration energy** and more needs to be done to work towards smarter contracts (by companies with the encouragement of regulators and governments).



COMBINING DEMAND REDUCTION AND EQUITABLE ENERGY BILLS

- Equitable compensation of retail bills is important, however this should be combined with **high marginal prices for the final uses of energy. The German gas proposal could be more generally applied to electricity at the MS level.** The scheme offered tailored price reductions for up to 80 per cent of household consumption and 70 per cent of industrial consumption, with the rest being priced at market prices.
- According to the theory of optimal taxation, consumer support is best administered through the regular tax and welfare system. **Priority should be given to better communication between the databases of electricity retailers and government welfare programmes.**
- Consumers should be allowed to hedge market risk while encouraging demand flexibility and energy conservation. **One way to do that would be to combine real-time pricing with financial difference payments for a fixed quantity of energy.**
- **Tariff models can help stabilise bills by allocating the benefits (and costs) of fixed-price long-term contracts to all consumers or all of a particular group of consumers.**



REGULATION OF RETAIL OFFERS

- **Stricter requirements on the financial position of suppliers are likely warranted, including supplier stress-testing and specification of minimum forward hedging requirements.**
- **Consumers must, to some extent, be held responsible for their choice of supplier – otherwise the door would be wide open to offers that are "too good to be true" – but they must also have ways of entering into a new contract on reasonable terms when warranted.**
- **Given that both financial regulation and customer protection come at a cost, finding the right trade-off should be a priority for national energy regulators.**
- **In the Netherlands, the cap on penalties that consumers pay for early contract termination seems to have undermined the market for long-term contracts. Regulation of contractual terms must therefore better balance consumer protection and incentives of suppliers.**
- **Good commercial practices corresponding to national circumstances should continue to be the preferred approach, while the requirements for hedging of suppliers should be reinforced via harmonised EU legislation.**



SOME CONCLUDING THOUGHTS

- We should **distinguish carefully between actions which are short-term**, but need to be robust to a prolonged war **and those that are genuinely about a net zero energy system.**
- Even if the **European wholesale markets in electricity and gas** collapsed tomorrow they **have withstood a globally unprecedented stress test** for a prolonged period.
- **We have seen a taste of the net zero future: coupled energy markets, high unit energy prices, high carbon prices and no ‘missing’ money.** Because we have tasted the future and wholesale markets have worked then this means we don't need to radically change the operation of wholesale gas and electricity markets just yet.
- **There clearly are issues for retail markets.** These are currently suspended and it will be difficult to put them back together, where they existed before.
- **There are some proposals for change, but they are not new or radical,** but the arguments for and against them are not altered by the crisis, though some are exposed to more scrutiny, e.g. **long term CfDs have had a boost, more use of LMPs seems less likely.**



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