A series of overlapping, irregular black lines forming a complex geometric pattern in the upper left quadrant of the page. The lines vary in length and orientation, creating a sense of depth and movement.

A CRISIS BOUND TO HAPPEN !!!
EUROPE WILL NEVER SEE LOW ELECTRICITY PRICES AGAIN

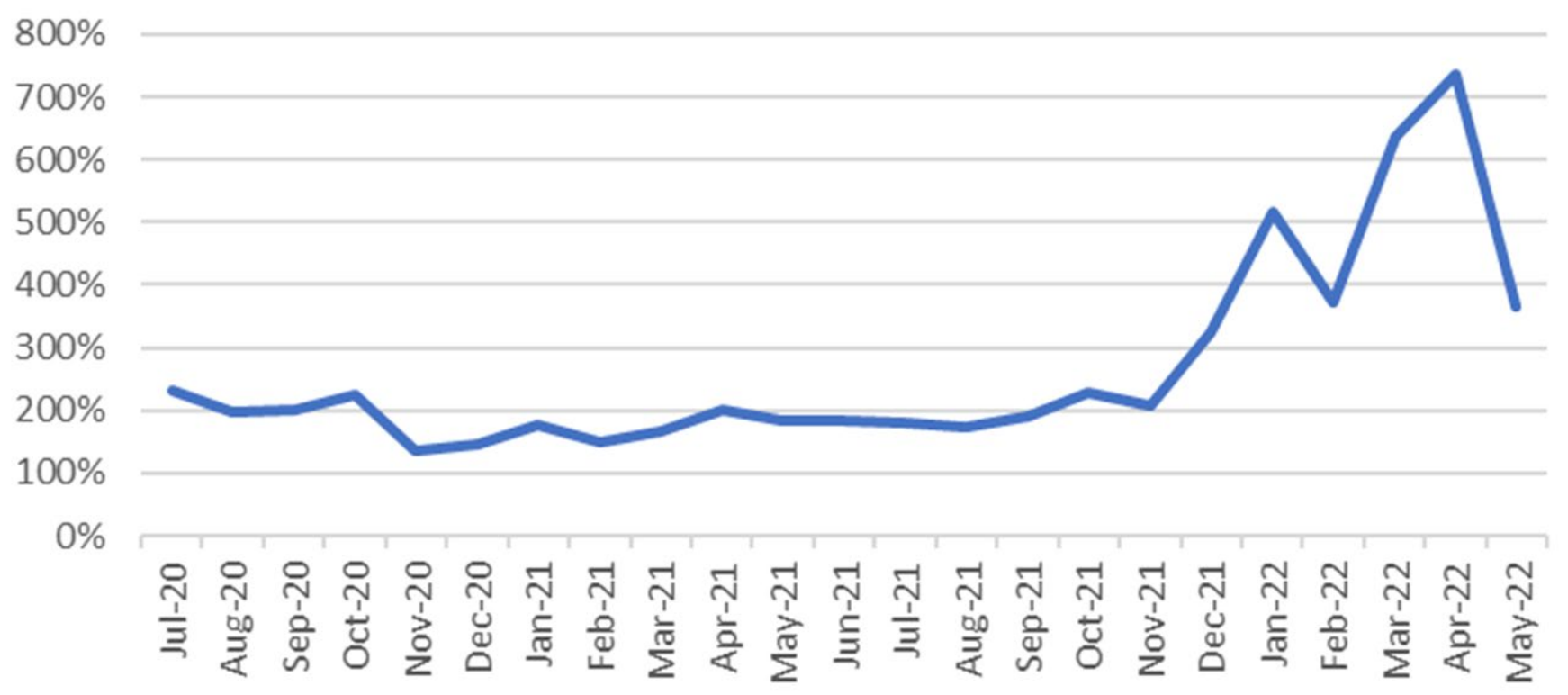
kyazitzoglou@geohellas.com

The Economist
Europe | Charlemagne
Menu Weekly edition Search

Europe's energy crisis will trigger its worst neuroses

A surge in gas prices is the stuff of nightmares

NATURAL GAS COST COMPARISON EUROPE vs USA

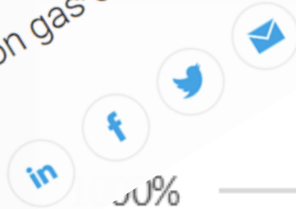


OPINION

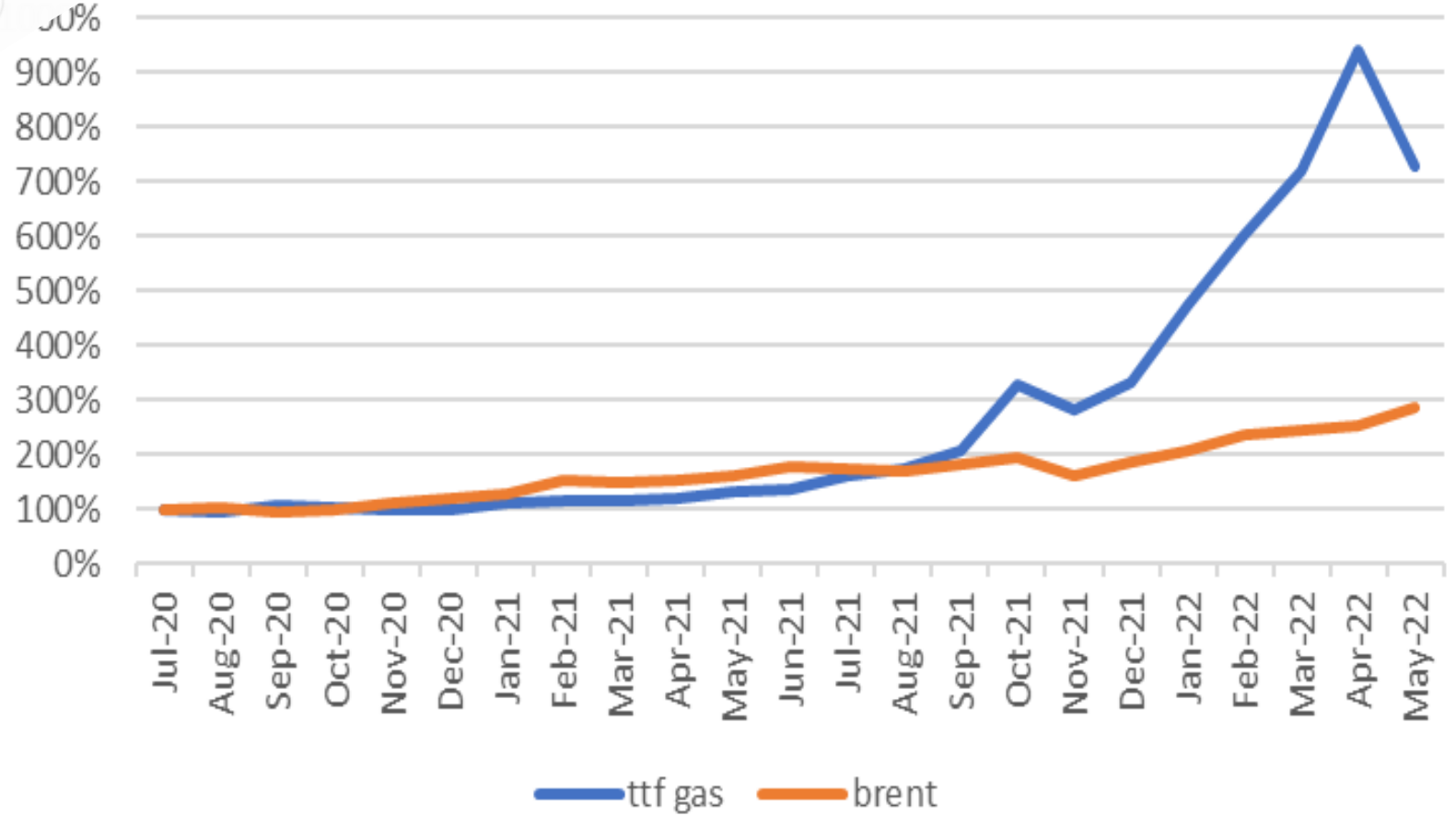
Spot market not a reliable pricing mechanism, says GECF leader

Dr Yury Sentyurin cautions against relying on gas-on-gas pricing

24 September 2018



brent vs ttf price increase



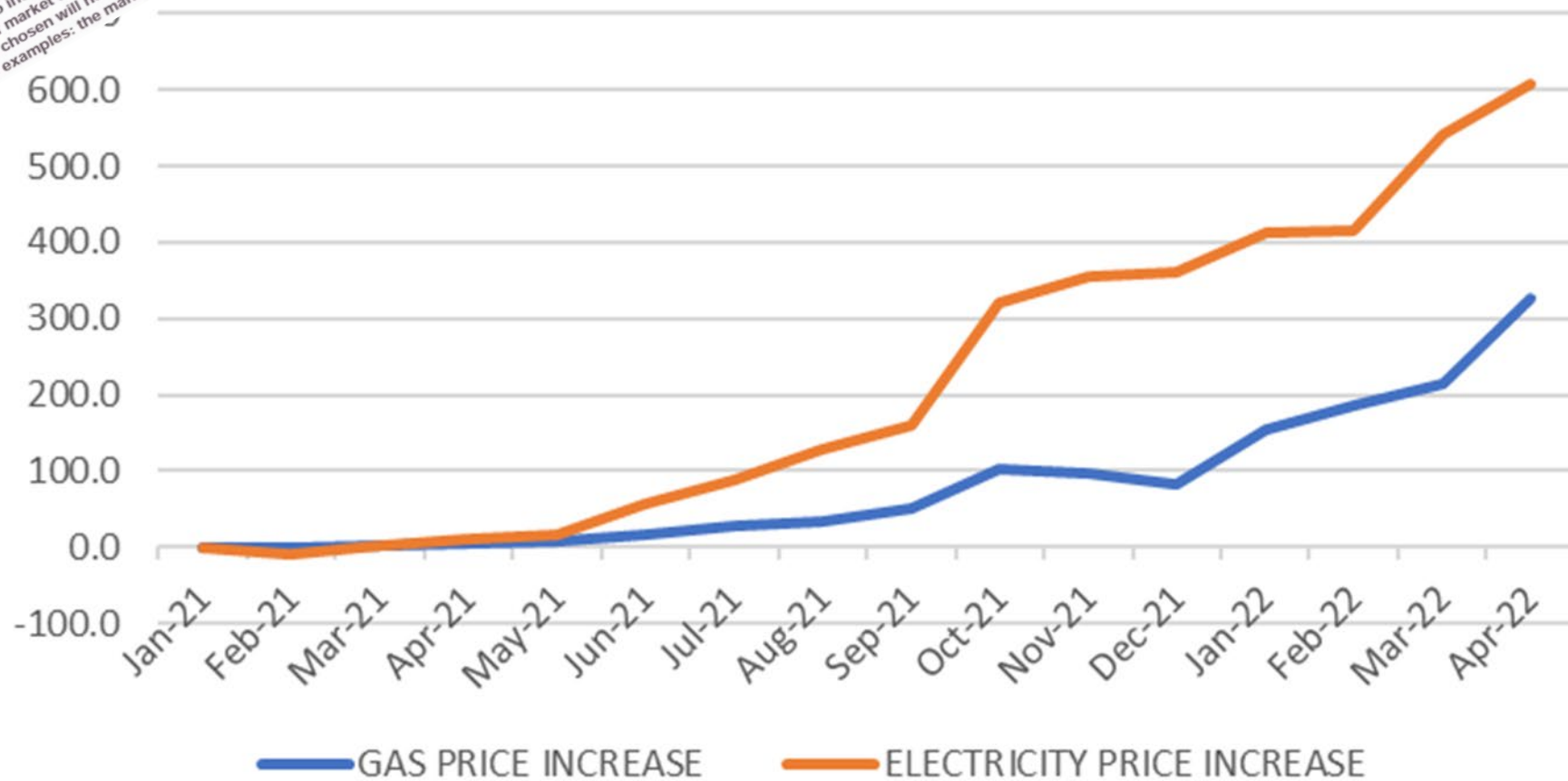
Agenda

Advancing economics in business

The EU electricity target model: the devil is in the details?

Creating an EU internal energy market requires both 'software' and 'hardware' solutions—ie, rules to allow trade across borders, and financing models to increase the physical capacity of interconnections. The EU target model defines a number of market design elements for this purpose, raising the question of whether the design options chosen will necessarily improve market efficiency, or could risk hindering it. We look at two examples: the management and

Gas vs electricity price increase in GR



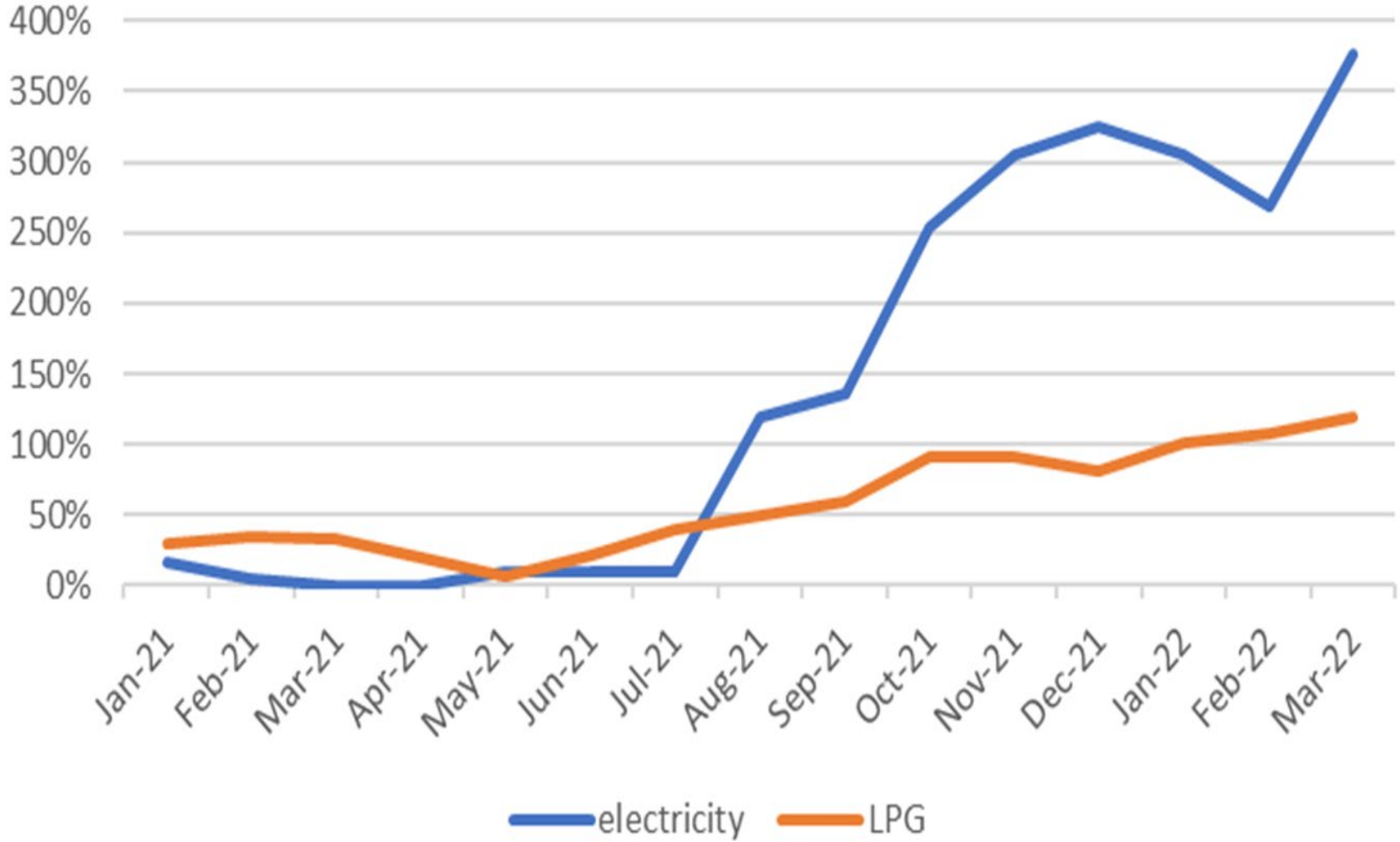


GEOHELLAS

Technical clays. Natural solutions.



electricity & LPG increase for GEOHELLAS



ENERGY COSTS + 160%
PRODUCTION COSTS + 40%
PRICE INCREASE + 30%




CUSTOMER REACTION

Look for alternative suppliers

Look for alternative materials

Pass the increase to his customers



PRODUCER'S OPTIONS

Suffer the losses (how long???)

Move processing out of the EU

Invest in alternative technologies



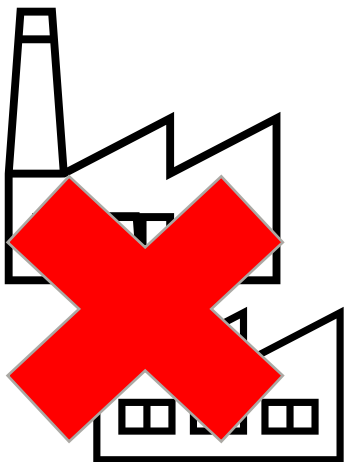
But first answer the 1mio\$
question

HOW MUCH ?

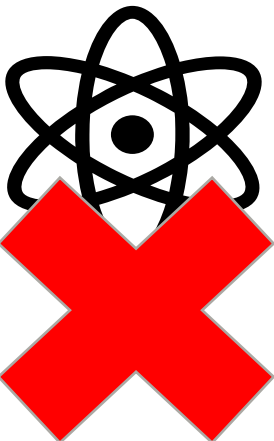
+

HOW LONG ???

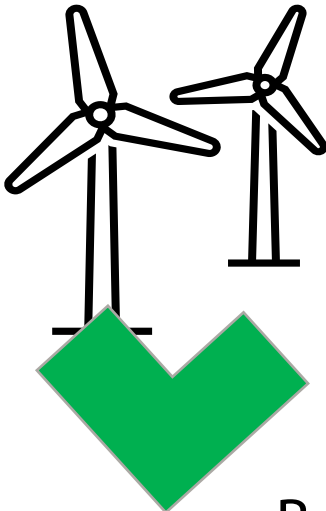
EUROPEAN ELECTRICITY PRODUCTION



Cheap but
polluting

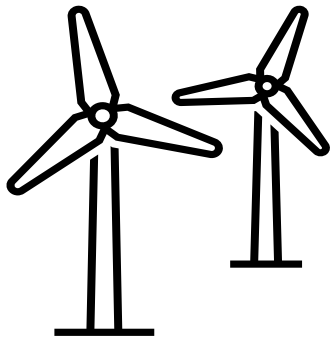


Cheap but
dangerous



..... But
Clean

REPowerEU: affordable, secure and sustainable energy for Europe



Accelerating clean energy

Renewables are the cheapest and cleanest energy available, and can be produced domestically, reducing our need for energy imports.

TWO DATES TO REMEMBER

JUNE 12, 2021

Renewables on the system (mostly wind) rendered a total of 4 GWH for the whole day. The average daily production for low production months is over 20 GWH

APRIL 2, 2022

The Greek system rejected 500 mw of renewable power for stability reasons.

NB – renewables today account for almost 35% of total annual energy supply

QUESTIONS

CAN WE GO 100%RENEWABLES –
IF NOT, HOW MUCH?

IF WE GO <100% WHICH
ALTERNATIVE DO WE CHOOSE?

WHAT WOULD THE COST BE,
IN TODAY'S NUMBERS

MIT News
ON CAMPUS AND AROUND THE WORLD

Study reveals plunge in lithium-ion battery costs

But...

ACCORDING TO A
STUDY BY MCKINSEY...

NICKEL AND COBALT DEMAND WILL
MORE THAN DOUBLE, WHILE LITHIUM
DEMAND MIGHT GO UP TO 7 TIMES.

55% of Ni production is in Indonesia, Philippines and
Russia,

66% of Co production is in Congo, Australia and Russia

80% of Li production is in Australia, Chile and China.

MY ARBITRARY CONCLUSIONS

- *Either*

Only Renewables (+ batteries)

> electricity cost above 250
euro/mwh

> 10bn euro annual cost for Greece

MY ARBITRARY CONCLUSIONS

- *or*

Renewables (<50%) + something else

=> revision of our policies (and
fallacies)



THANK YOU