



Dealing with the Ukraine war: Giving answers before having put the questions?

Stefan P. Schleicher
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Plenary Workshop
**“Green Finance and the war in Ukraine:
Do we now need to start from scratch on
FitFor55 and Taxonomy?”**

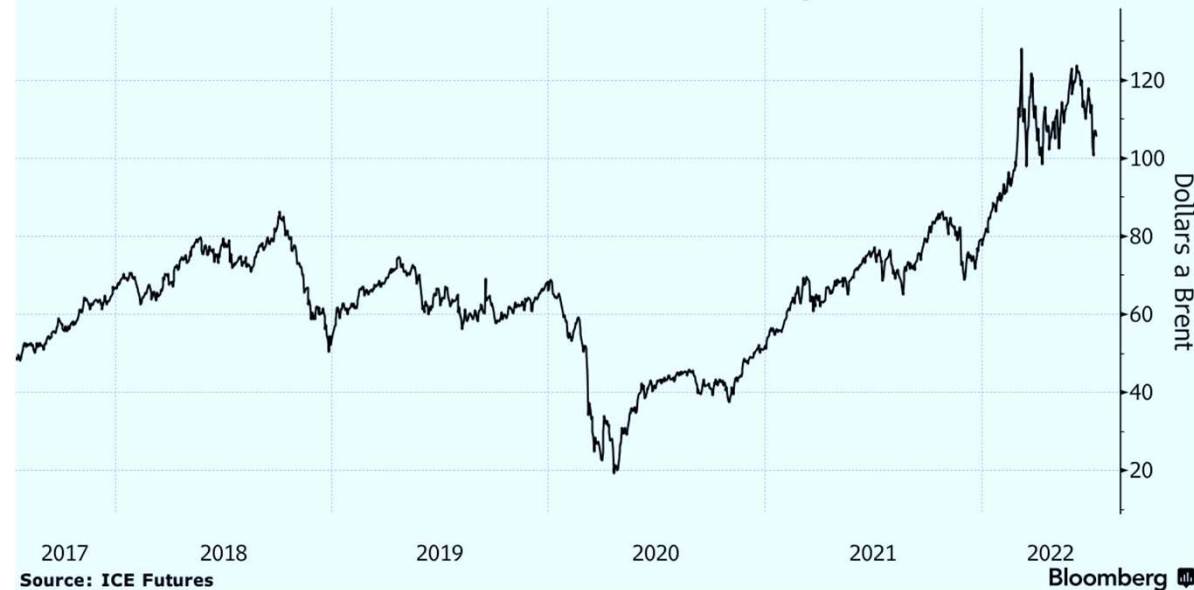


My testimonial

- Fati Birol, IEA:
“The world has never witnessed such a major energy crisis in terms of its depth and its complexity.”
- Like the oil crises of the 1970s this may speed up the transition not only of the energy system but the whole economic system.
- The European Green Deal and FitFor55 offer outstanding guidance for managing this transition.

Energy Crisis

Brent oil soared after Russia invaded Ukraine in February



<https://www.bloomberg.com/news/articles/2022-07-12/worst-of-global-energy-crisis-may-be-ahead-iea-s-birol-warns>

EU to publish plan to cut gas use on July 20: “Save gas for a safe winter”

- ❑ Demand reduction plan
 - ❑ to use less gas and preparing for further cuts
- ❑ Possible contents of this plan
 - ❑ financial incentives for companies to cut gas use
 - ❑ state aid for fuel switching
 - ❑ campaigns to nudge consumers to use less energy for heating and cooling
- ❑ Possible instruments of this plan
 - ❑ auctions or tenders for large consumers to receive compensation for using less gas
 - ❑ interruptible contracts with pre-determined financial compensation for gas volume reduction
 - ❑ mandatory heating (19°C) and cooling (25°C) limits for offices, shopping centers, ...
 - ❑ order for gas rationing in supply emergencies



The compressor station in Mallnow, near the German-Polish border, has stopped receiving Russian gas through the Yamal-Europe pipeline on 11 July

IEA: A 10-Point Plan to Reduce the European Union's Reliance on Russian Natural Gas

“Measures implemented this year could bring down gas imports from Russia by over one-third, with additional temporary options to deepen these cuts to well over half while still lowering emissions.”



RePowerEU

May 2022

How to undertake an orderly and affordable phase out of Russian gas by 2027 while also accelerating its green transformation?

- requires an additional investment of €210 billion between now and 2027
- would save almost €100 billion per year in reduced fossil-fuel imports

- Energy efficiency and savings
 - governments must actively promote awareness campaigns
 - DEU, ESP, FRA, ITA have spent since September 2021 around €100 bn for subsidizing energy prices
- Energy supply diversification
 - EU Energy Purchase Platform
- Clean-energy transition acceleration
 - proposes to increase the EU's headline 2030 target for renewables from 40% to 45%
 - Investment and reform
- Contingency measures in case of a sudden interruption to Russian gas supplies
 - creation of a coordinated European plan for the reduction of industry gas demand
 - suggests an EU gas price cap in case of an emergency situation

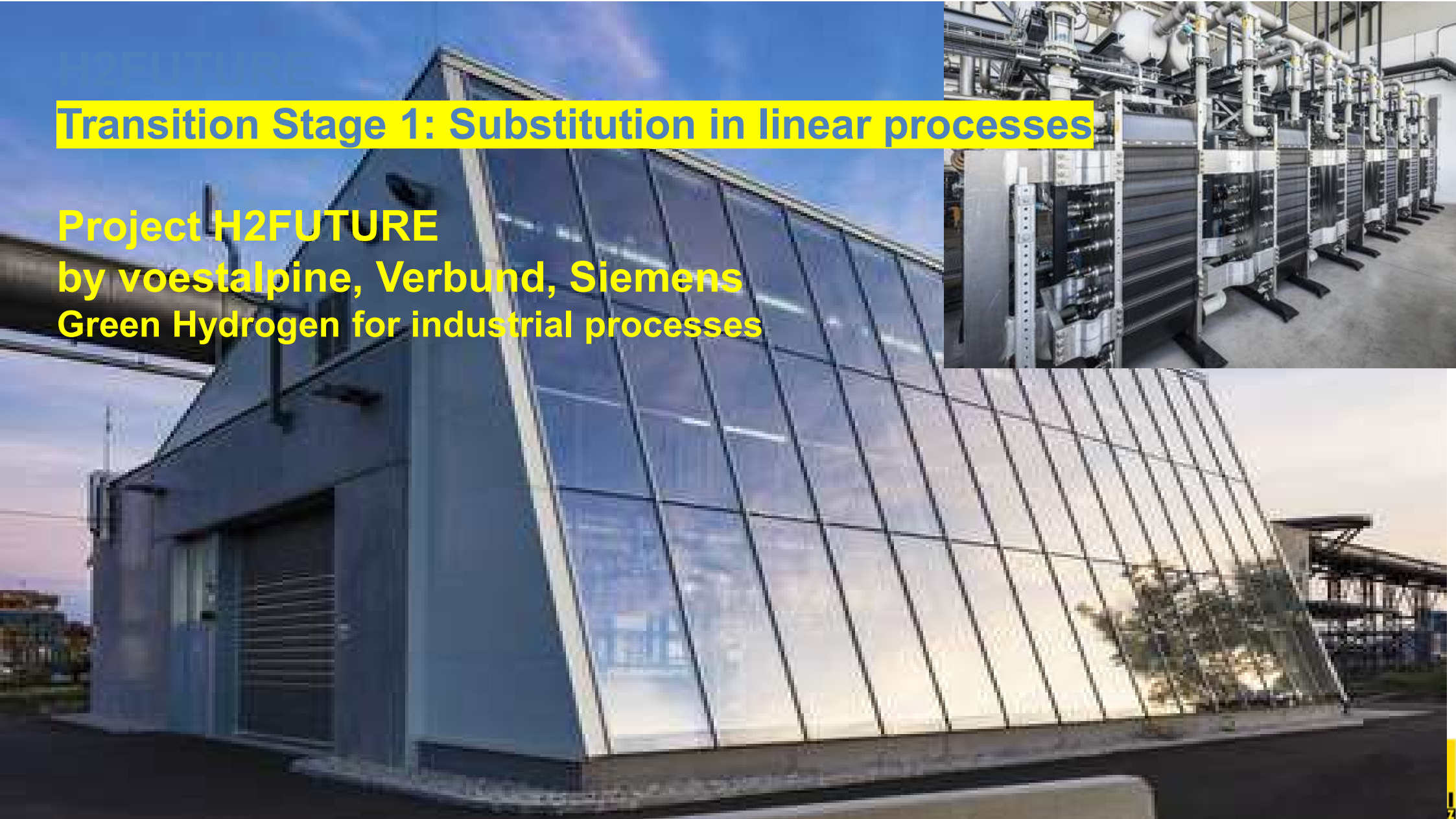
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Do we know where the transition should be heading?

Fathoming the switch to a full-circular carbon economy

Transition Stage 1: Substitution in linear processes

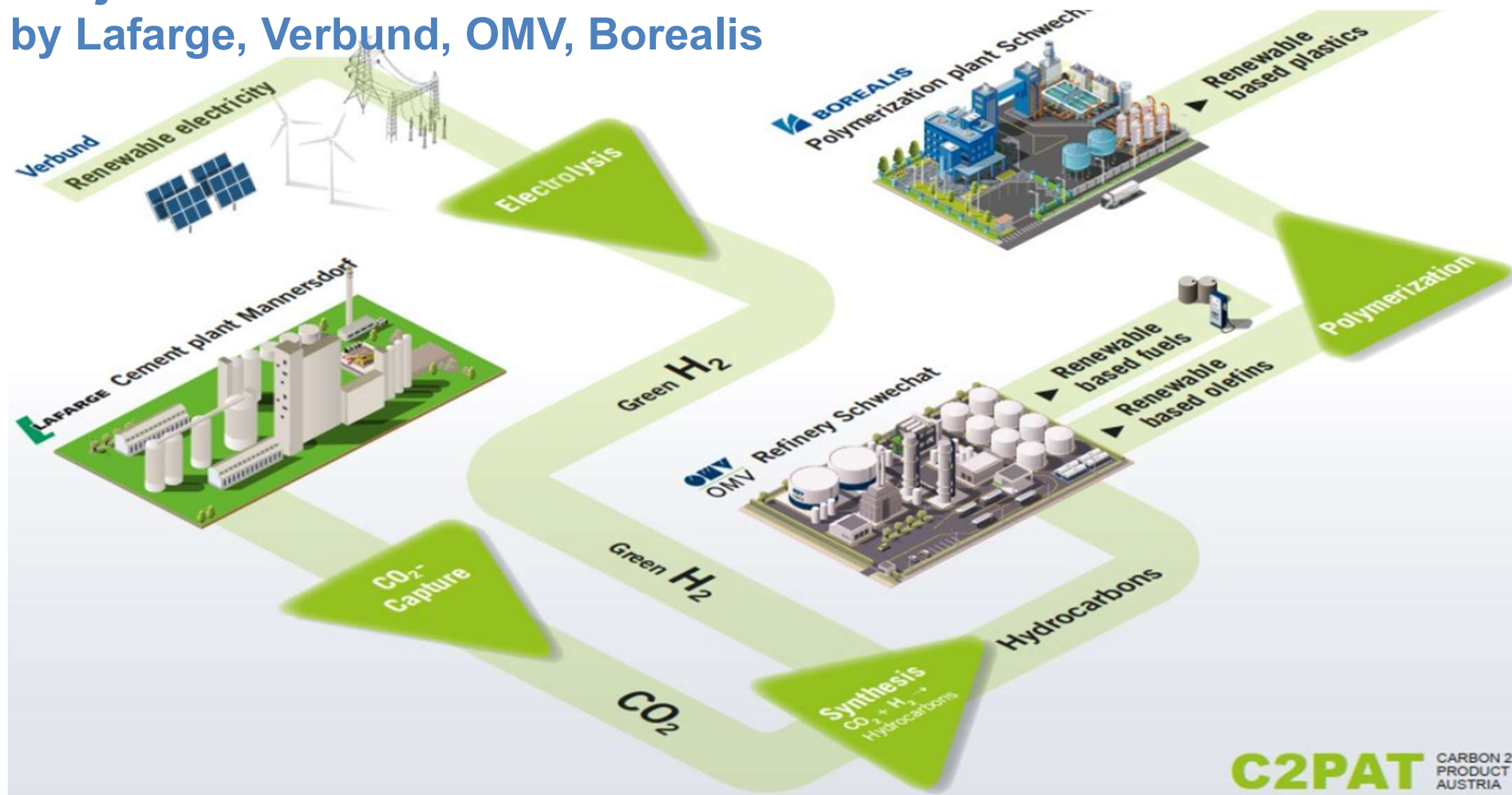
Project H2FUTURE
by voestalpine, Verbund, Siemens
Green Hydrogen for industrial processes



Transition Stage 2:

Recycling of carbon in circular industrial processes

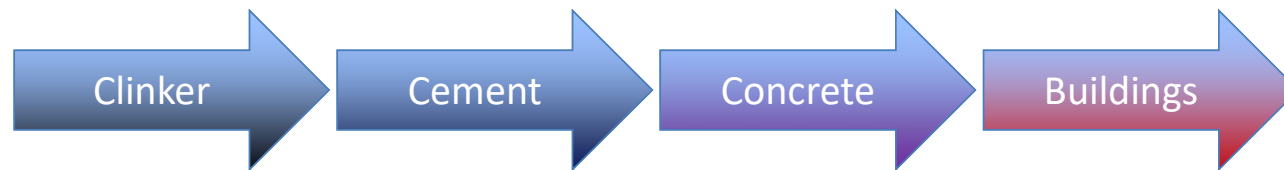
Project C2PAT: Carbon to Product Austria
by Lafarge, Verbund, OMV, Borealis



Transition Stage 3:

Discovering synergies on the full value chain

From cement clinker to buildings



33%
Energy
Emissions

67%
Process
Emissions



Process emissions (the chemical reaction occurs in the heating of limestone) accounts for 67% of emissions in the production of clinker

Clinker comprises 10% of the mass but 90% of the CO₂ footprint in a cubic meter of concrete

Up to 70% of cement can be reduced in a building by improved designs

3

**Are we open for new
financial mechanisms?**

**Some implications for
Green Finance**

Financing the disruptive transition to a net-zero economy

- ❑ **Annual investment needs for innovative infrastructure (buildings, production, energy, mobility)**
 - ❑ **IEA: between 2% and 3% of annual GDP, i.e. between €350 bn and €550 bn for the EU per year**
- ❑ **Currently available and suggested**
 - ❑ **€225 bn loans under RRF**
 - ❑ **€20 bn in grants from the sale of EU Emission Trading System allowances currently held in the Market Stability Reserve as suggested by the Commission**
- ❑ **Private sector commitments:**
 - The Net Zero Asset Managers initiative**
 - ❑ **an international group of asset managers committed to supporting the goal of net zero greenhouse gas emissions by 2050 or sooner**
 - ❑ **273 signatories**
USD 61.3 trillion in assets under management

Financing an unprecedented push for targeted innovation

- ❑ **Using ET ETS free allocation as innovation aid**
 - ❑ **10% of free allowances issued between 2026 and 2030 set aside would make some €40 bn in additional funding available**
- ❑ **Carbon Contracts for Difference (CCFD)**
 - ❑ **could be financed from these additional funds**
 - ❑ **only the difference between the ETS price and the abatement costs of a climate neutral technology need to be paid as a subsidy**
- ❑ **Free allocations in EU ETS for supporting innovation – zero carbon benchmarks**
 - ❑ **example hydrogen:
free allocations are given for hydrogen from steam methane reforming
but no free allocations for hydrogen from electrolysis with carbon free electricity**
 - ❑ **therefore, free allocations could be given to producers of zero-carbon goods, as green steel or green cement**

❑



Thank you.

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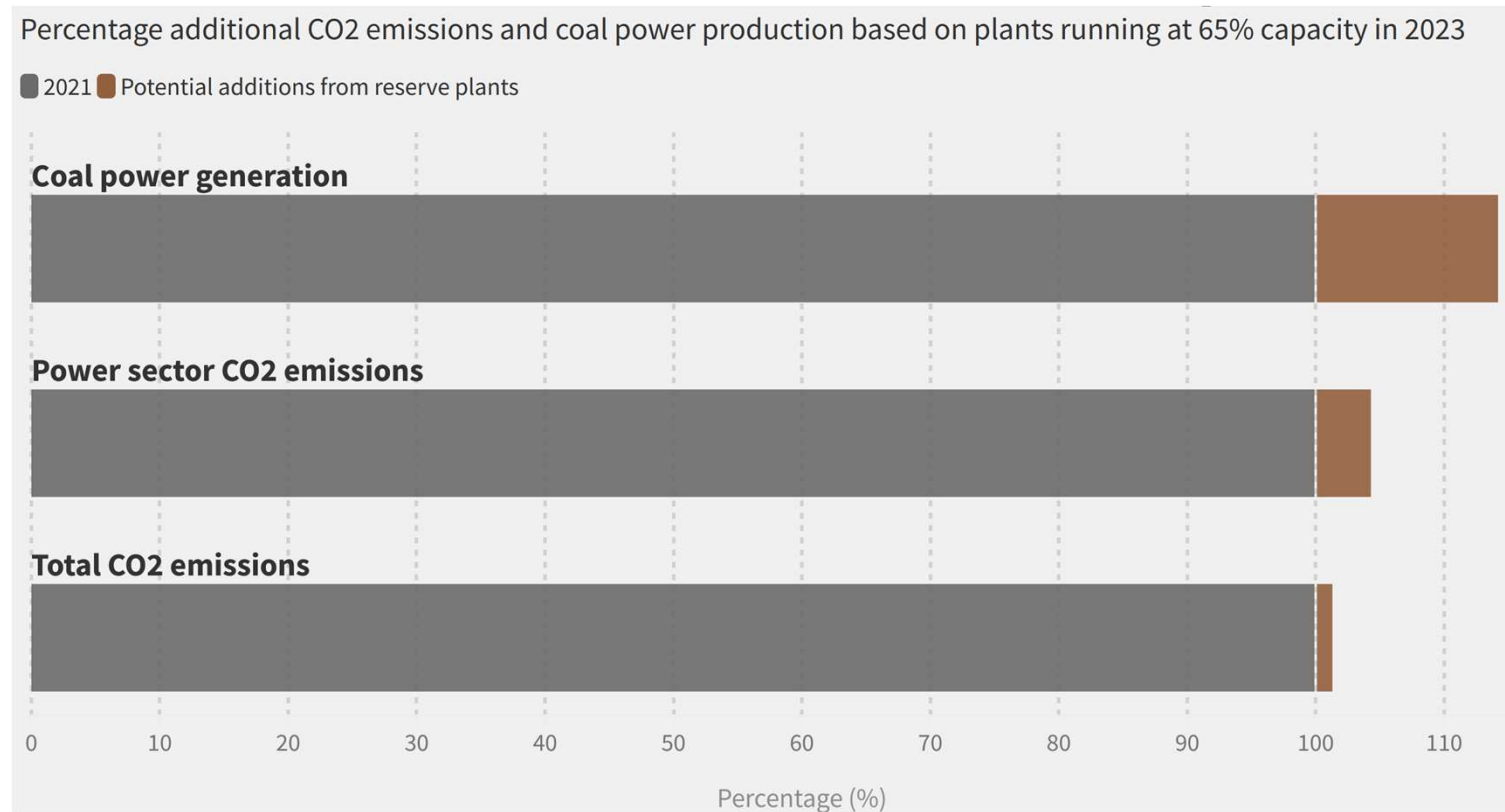
Background picture: Graphene atoms

Graphene is a super-thin layer of graphite with incredible capabilities. It is a single atomic layer in thickness, however, it is stronger than steel, able to conduct heat better than copper, can conduct electricity better than silicon and has numerous properties that have caused scientists all over to call it “the wonder material.” It is expected to play a major role in reducing CO₂ emissions.

Backup Slides

Limited increase in coal power in Europe

14 GW of coal-fired plants have been placed on standby in Europe. Running at 65% capacity throughout 2023, they would generate 60 TWh of coal-fired electricity, which is enough to power the EU for about one week.



IEA: A 10-Point Plan to Reduce the European Union's Reliance on Russian Natural Gas

Measures implemented this year could bring down gas imports from Russia by over one-third, with additional temporary options to deepen these cuts to well over half while still lowering emissions.



<https://ember-climate.org/insights/research/coal-is-not-making-a-comeback/>



A 10-Point Plan to Reduce the European Union's Reliance on Russian Natural Gas (1)

Action 1



No new gas supply contracts with Russia

Impact: Taking advantage of expiring long-term contracts with Russia will reduce the contractual minimum take-or-pay levels for Russian imports and enable greater diversity of supply.

Action 2



Replace Russian supplies with gas from alternative sources

Impact: Around 30 bcm in additional gas supply from non-Russian sources.

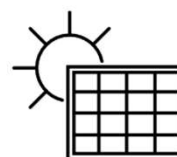
Action 3



Introduce minimum gas storage obligations to enhance market resilience

Impact: Enhances the resilience of the gas system, although higher injection requirements to refill storage in 2022 will add to gas demand and prop up gas prices.

Action 4

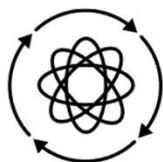


Accelerate the deployment of new wind and solar projects

Impact: An additional 35 TWh of generation from new renewable projects over the next year, over and above the already anticipated growth from these sources, bringing down gas use by 6 bcm.

A 10-Point Plan to Reduce the European Union's Reliance on Russian Natural Gas (2)

Action 5



Maximise generation from existing dispatchable low-emissions sources: bioenergy and nuclear

Impact: An additional 70 TWh of power generation from existing dispatchable low emissions sources, reducing gas use for electricity by 13 bcm.

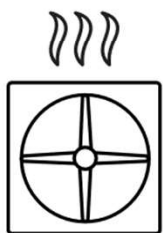
Action 6



Enact short-term measures to shelter vulnerable electricity consumers from high prices

Impact: Brings down energy bills for consumers even when natural gas prices remain high, making available up to EUR 200 billion to cushion impacts on vulnerable groups.

Action 7



Speed up the replacement of gas boilers with heat pumps

Impact: Reduces gas use for heating by an additional 2 bcm in one year.

Action 8



Accelerate energy efficiency improvements in buildings and industry

Impact: Reduces gas consumption for heat by close to an additional 2 bcm within a year, lowering energy bills, enhancing comfort and boosting industrial competitiveness.

A 10-Point Plan to Reduce the European Union's Reliance on Russian Natural Gas (3)

Action 9



Encourage a temporary thermostat adjustment by consumers

Impact: Turning down the thermostat for buildings' heating by 1°C would reduce gas demand by some 10 bcm a year.

Action 10



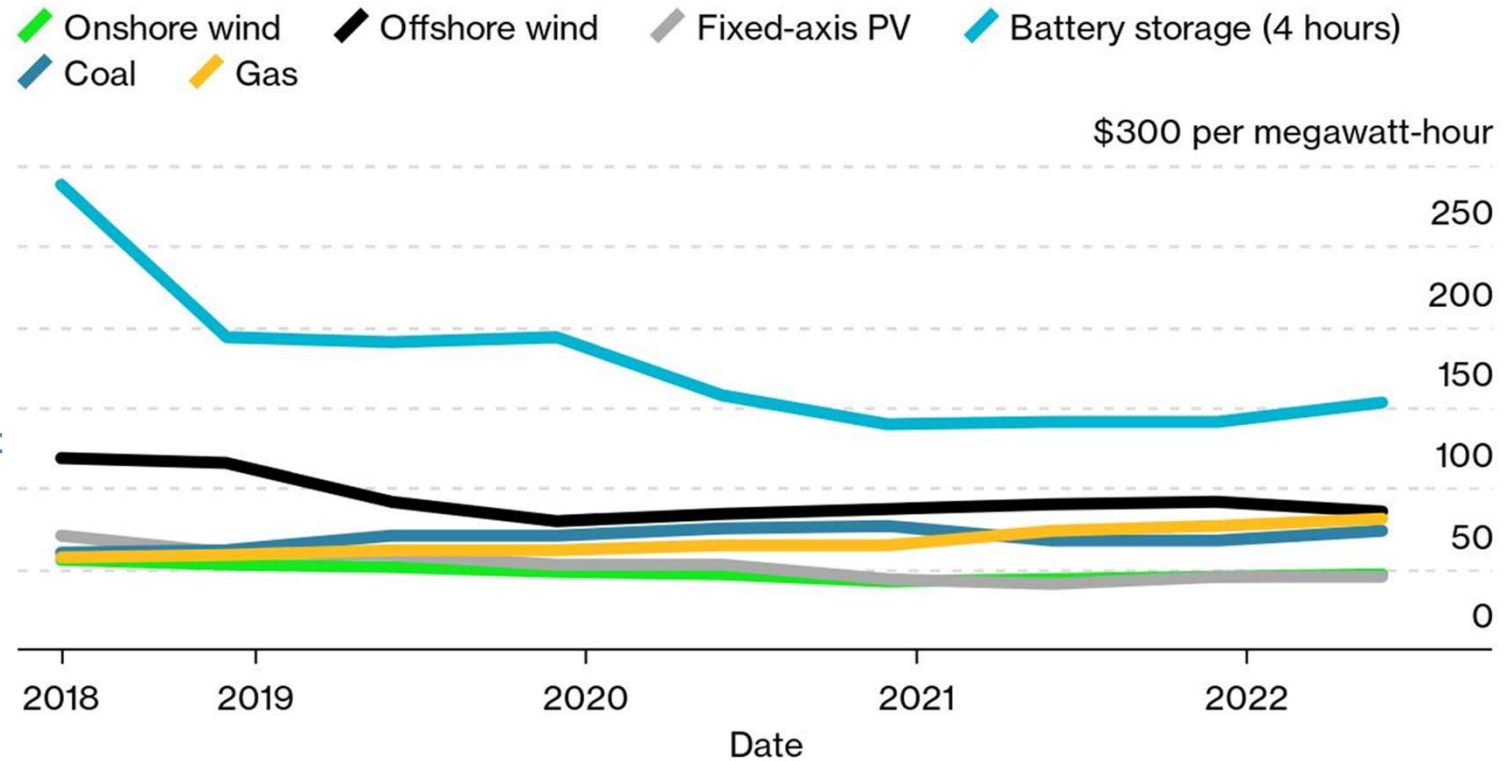
Step up efforts to diversify and decarbonise sources of power system flexibility

Impact: A major near-term push on innovation can, over time, loosen the strong links between natural gas supply and Europe's electricity security. Real-time electricity price signals can unlock more flexible demand, in turn reducing expensive and gas-intensive peak supply needs.

Levelized cost of electricity

**Renewables flatten,
fossils and batteries
rise**

Levelized cost is the average net present cost of electricity from a power project over its entire lifetime

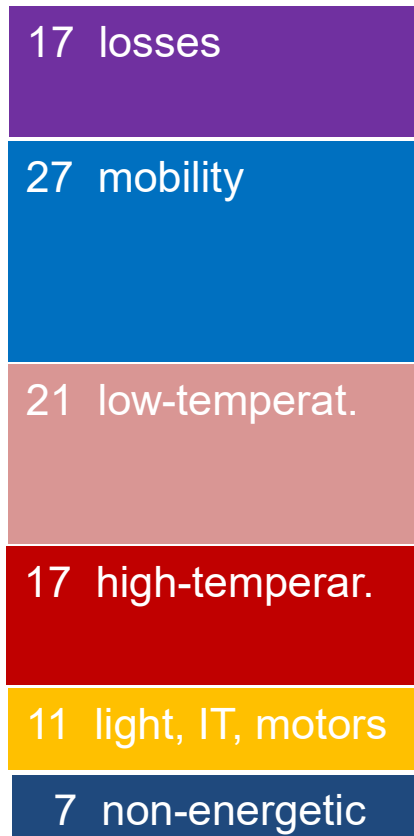


Source: BloombergNEF

The EnrgyFutures project <https://energyfutures.net/>

An innovative approach to modeling the transition to climate neutrality

2021



20??



20?? A



20?? B

