



TRANSFORMERS MAGAZINE'S
INDUSTRY NAVIGATOR

INVESTMENTS, ARTIFICIAL INTELLIGENCE
AND SUSTAINABILITY
CONFERENCE 2024

KEY FACTORS IN ENSURING TRANSFORMER SUPPLY CHAIN IN EUROPE

Juan Miguel Muñoz • 13 June 2024





Ormazabal

Experts in customized and high-tech electrical solutions for the electrical grid.



Our purpose:

- To lead the technological evolution of electrical networks, enabling the energy transition.
- To transform the electrical grid into an infrastructure for the future: more reliable, resilient and sustainable.



How do we do it?

We design and manufacture solutions to:



Digitalize the electrical grid to integrate more renewable energy generation



Enable more sustainable mobility



Guarantee the power supply to buildings and infrastructures with critical energy needs.





Bottlenecks in the supply chain in Europe

Energy transition



Demand

Reindustrialization policies, Data Centers



Demand

Armed conflicts



Offer

Economic conflicts



Offer

Market regulation



Offer

Population growth



No effect





Energy transition

Solar PV, wind, green hydrogen, heat pumps, and battery energy storage

In the EU-27, electrification is projected to account for almost half of total GHG reduction by 2050.

Electricity demand is projected to increase two-to-threefold by 2050.

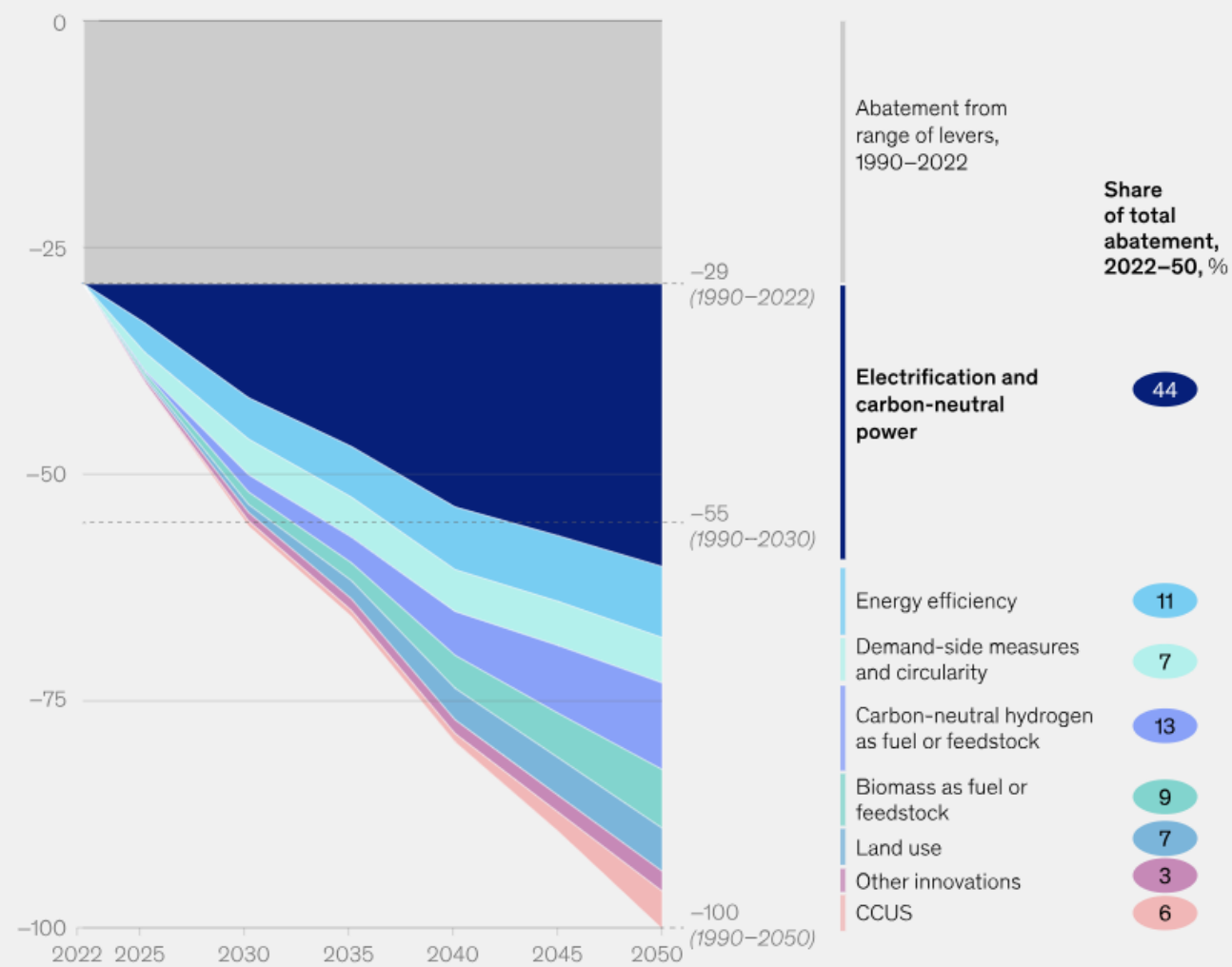
Electricity generation today is 40 percent of global greenhouse gas (GHG) emissions. **Switching to carbon-neutral power generation** would be a crucial decarbonization lever, alongside **mass electrification**.

Source: Global Energy Perspective 2023_ Industrial electrification outlook _ McKinsey





GHG abatement, relative reduction of CO₂e vs 1990 (EU-27), %



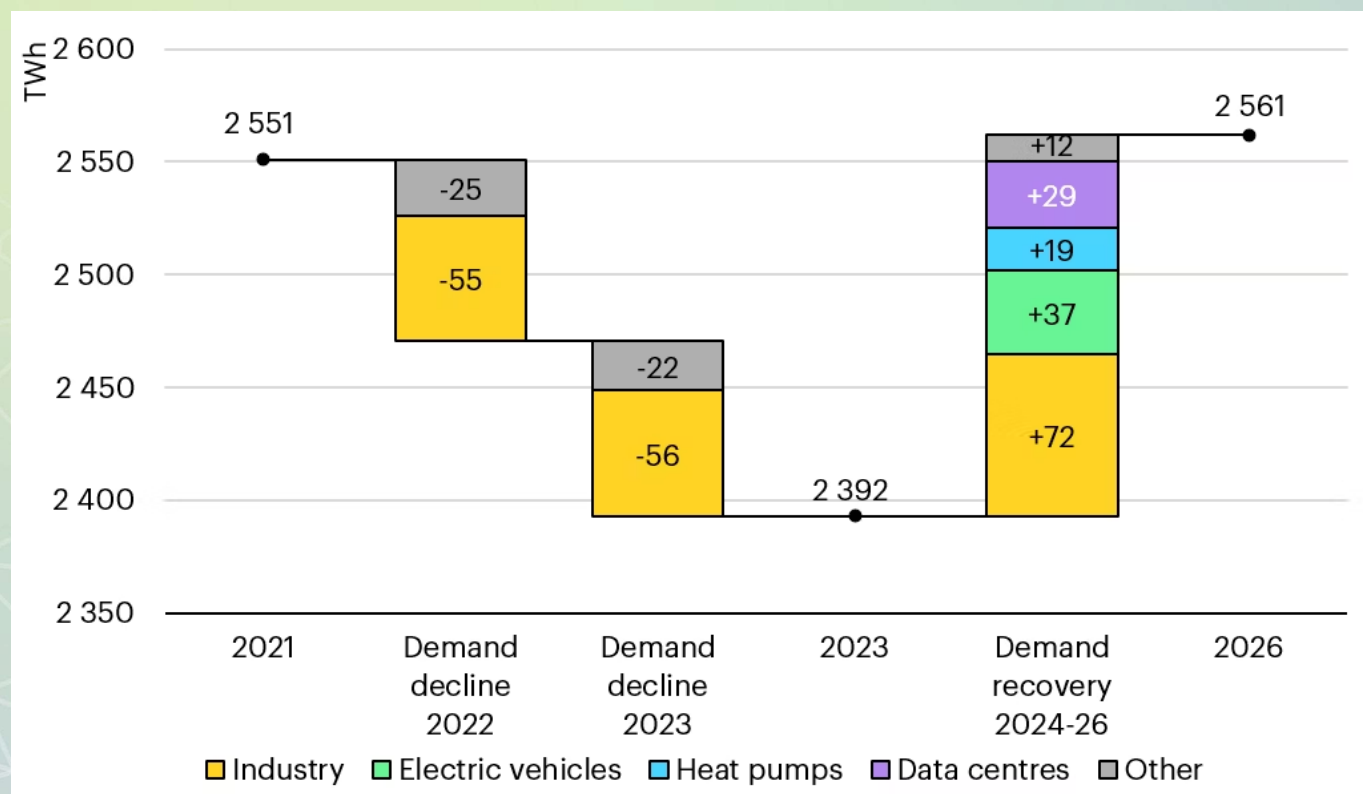
Source: McKinsey Energy Solutions' Decarbonization pathway optimizer 2020 (re-baselined in 2023)





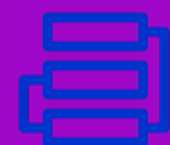
Reindustrialization policies and Data Centers

The demand for electricity in the EU is expected to grow by 7% during the period 2024-26



Industry

43% growth



Data Centers

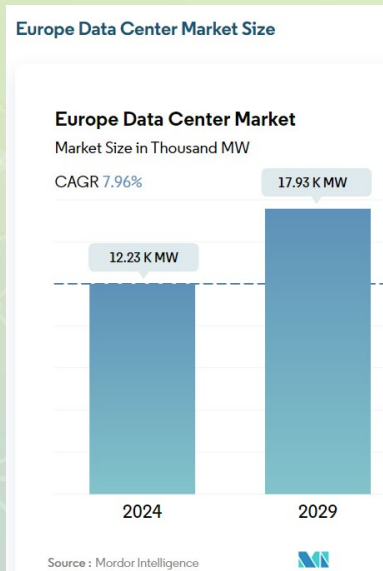
17% growth

Source: International Energy Agency
Electricity 2024 Abstract. Analysis and forecast to 2026



Reindustrialization policies

ECONOMY - WORLD ECONOMY
**Europe's
reindustrialization: A
challenging work in
progress**
Le Monde



Source: The resurgence of manufacturing Reindustrialization strategies in Europe and the US. Capgemini Research Institute

The key factors driving reindustrialization

Supply chain resilience

and the ability to respond quickly to operational disruptions of organizations

Sustainability

reindustrialization will help to meet climate goals

Geopolitical tensions

importance of domestic manufacturing in strategic sectors

Legislation and incentives

incentives accelerate investment for domestic production





Armed conflicts

Russian invasion of Ukraine

Israeli-Palestinian conflict

Red Sea Crisis

Next one?

Volatility and
increases in prices
of raw materials and
transportation

Lack of some
components and
materials

Extension of
delivery times

Instability, stress
in the supply
chain



We cannot control the causes but we can mitigate the effects

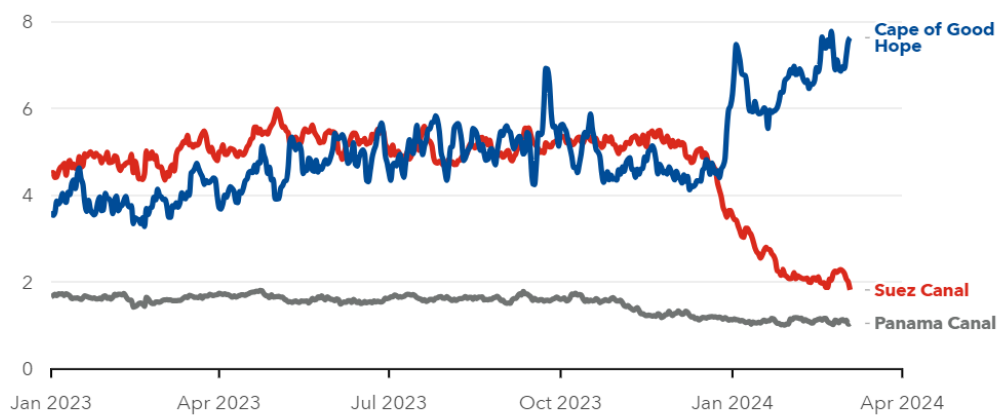




Armed conflicts

Daily transit trade volume

(million metric tons, 7-day moving average)

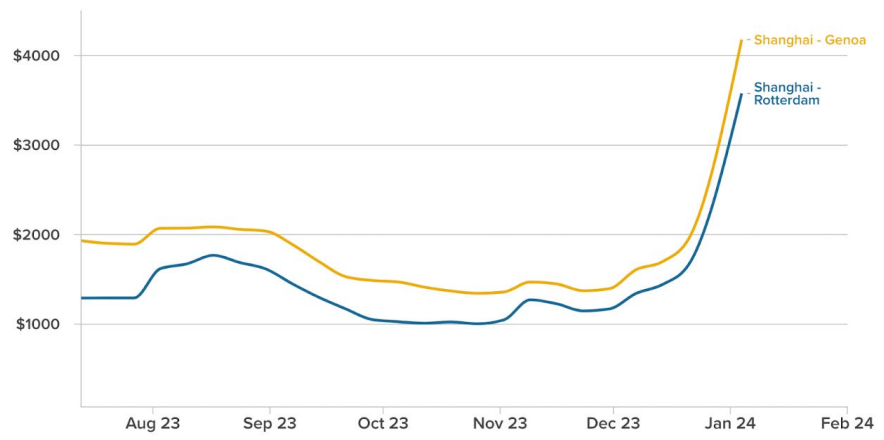


Sources: UN Global Platform, [IMF PortWatch](#).



Container prices surge

World Container Index Benchmark Rate

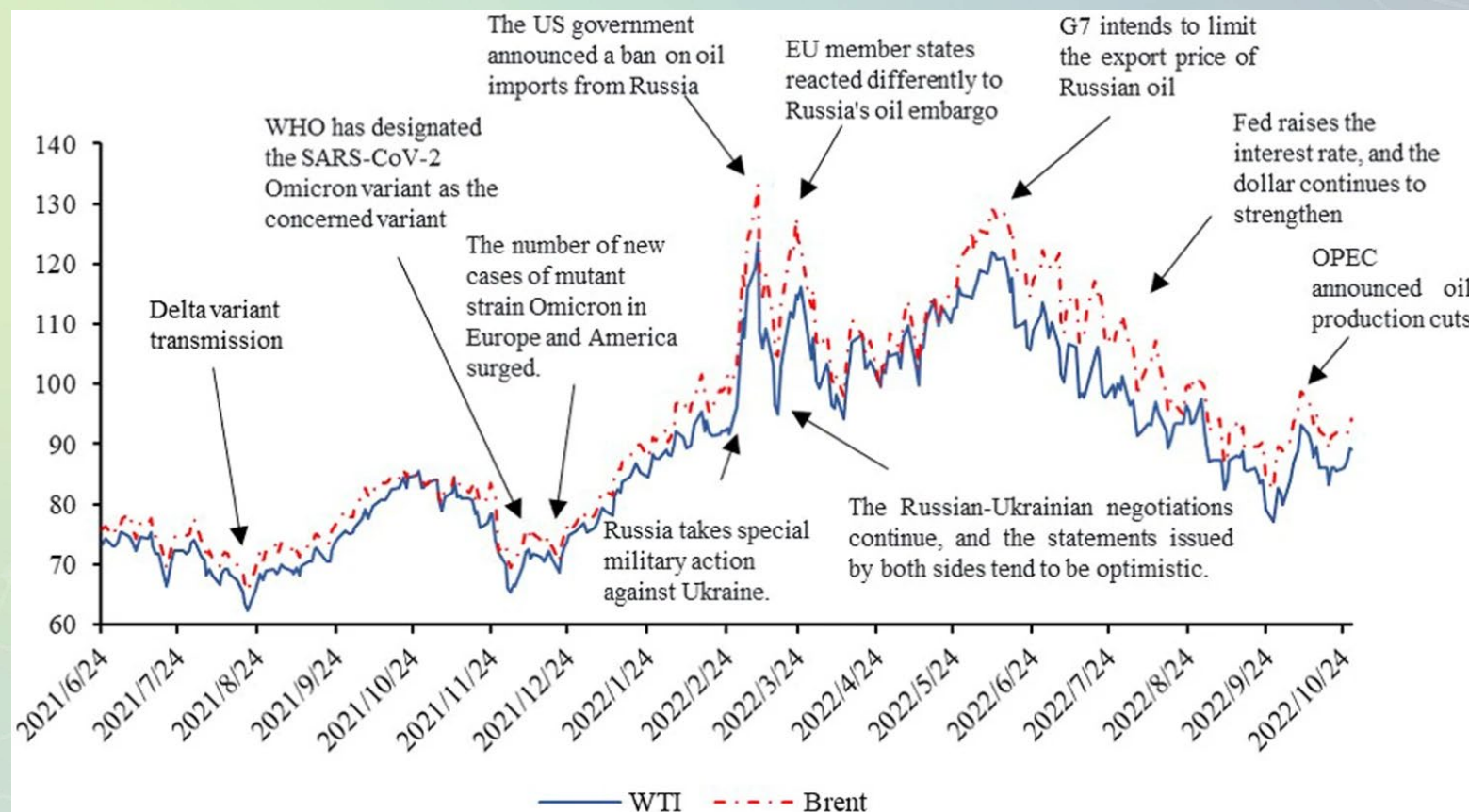


Source: Bloomberg





Armed conflicts



Source: The impact of Russia-Ukraine war on crude oil prices: an EMC framework
HUMANITIES AND SOCIAL SCIENCES COMMUNICATIONS





Economic conflicts / Trade wars

Expropriation

Boycotts

Tariff
discrimination

Stockpiling
of raw
materials

Prohibition of
investment
and other
capital flows

Trade
embargoes

Suspension
of aid

Sanctions

Freezing
of capital
assets

Monopolies
and
Oligopolies





Market regulation

Is the generation, transmission, and distribution of energy, and all the necessary equipment for it, strategic for Europe and for energy sovereignty?

What elements can influence a cost disparity in competition?



Labor
regulation



Energy costs



Sustainability
costs





How can we face it?

Sustainability and commitment to **ESG criteria** are increasingly relevant in our society

Improvement of
people's quality of
life

Social justice and
equity

Conservation
of the planet
for future
generations

Europe must be, and we are **fully committed**

We must **engage the entire supply chain**, from customer to the last supplier, in this commitment





How can we face it?

Domestic
Manufacturing

Long-term
vision

Management of
non-EU
manufacturing

Product
regulations





How can we face it?



Increase domestic manufacturing

- The best way to adapt and respond
- Local suppliers that strengthen the resilience of the supply chain
- Higher labor standards
- Faster fulfillment times
- Fosters investment in the long-term





How can we face it?



Long-term vision

- Stable and favorable frameworks for investment in the European industry
- Labor sector and its quality/talent
- “Acknowledge” some extra costs





How can we face it?



Management of non-EU manufacturing

- Ensure compliance of equipment and materials coming from inside and outside the EU
- Proper market surveillance/transparent and simple procedures
- TIER 3





How can we face it?



Product regulations

- The transformer has reached a very high level of efficiency
- Restrictions that may require the use of materials with limited markets and also lead to increased weights and dimensions, and carbon footprint





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¡ GRACIAS !

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