Energy Outlook Amid U.S. Policy Pivot

Antonio Merino. Chief Economist, Repsol

41º ANNUAL NABE E.P. CONFERENCE. Washington, March 3rd, 2025

Contenido

1. Are economics and energy indicators pivoting?
2. Are we seeing a change in our viewpoint on Oil Demand due to Policies?
3. What could AI's and Data Centers energy needs mean for gas demand?
4. Will Geopolitics bring a dramatic change in the renewable energy market?

Contenido

1. Are economics and energy indicators pivoting?
2. Are we seeing a change in our viewpoint on Oil Demand due to Policies?
3. What could AI's and Data Centers energy needs mean for gas demand?
4. Will Geopolitics bring a dramatic change in the renewable energy market?

Are economics and energy indicators pivoting?

Could Trump's election have been a turning point?

Recent developments in financial and energy indicators

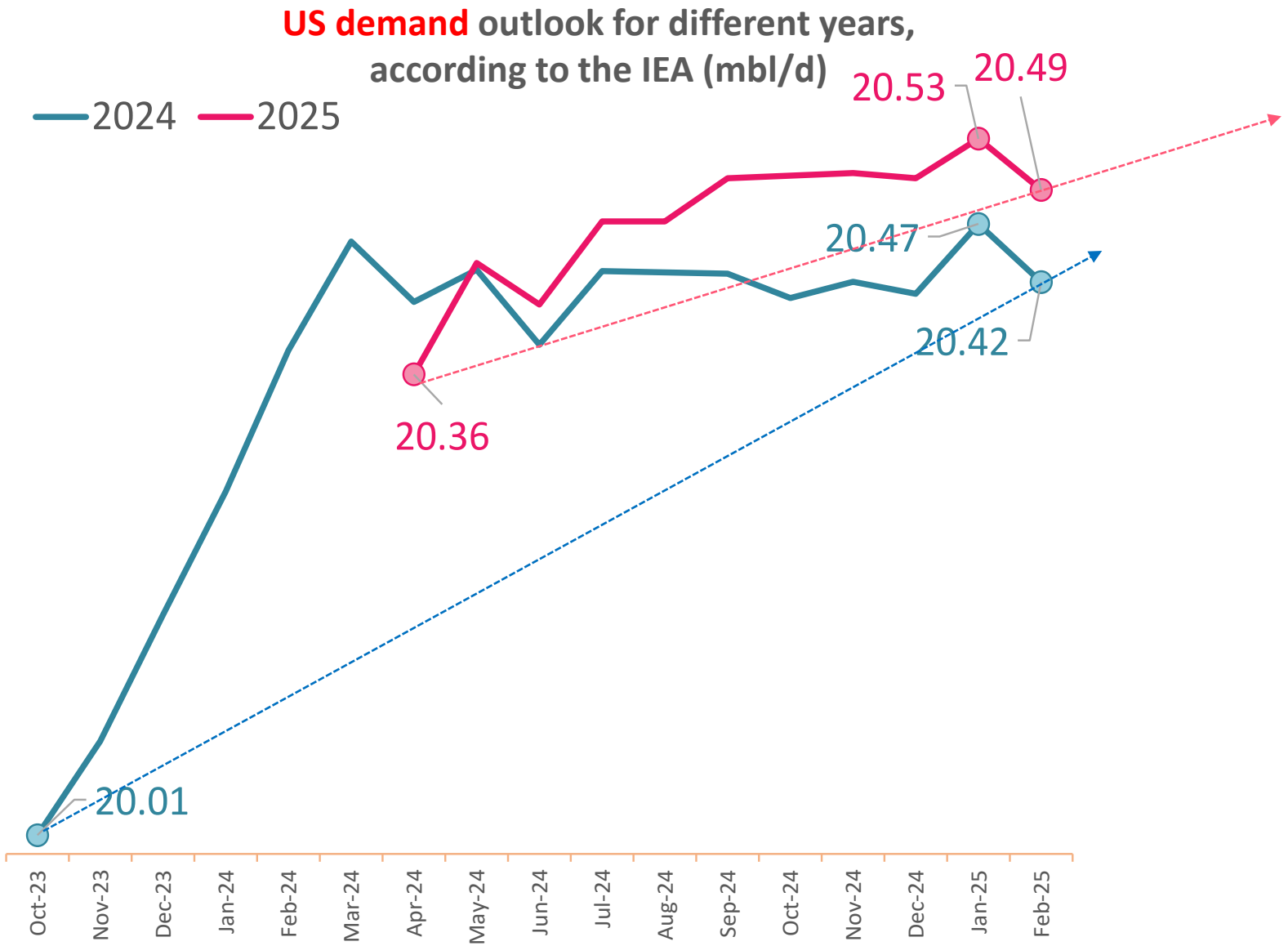
	25-Feb-25	25 Feb 2025 vs. 20 Jan 2025	20 Jan 2025 vs. 5 Nov 2024
Exchange rate	0.95 €/$	-0.9%	4.7%
UST 10Y	4.29%	-33 b.p.	36 b.p.
S&P500	5,955 points	-0.7%	3.7%
EUROSTOXX	5,448 points	5.5%	6.0%
WTI 1M	68.93 $/bl	-11.5%	8.2%

Contenido

1. Are economics and energy indicators pivoting?
2. Are we seeing a change in our viewpoint on Oil Demand due to Policies?
3. What could AI's and Data Centers energy needs mean for gas demand?
4. Will Geopolitics bring a dramatic change in the renewable energy market?

Are we seeing a change in our viewpoint on Oil Demand?

The IEA has been increasing its projections for U.S. demand for both 2024 and 2025. This trend applies to numerous industrial and emerging nations, with the exception of China.

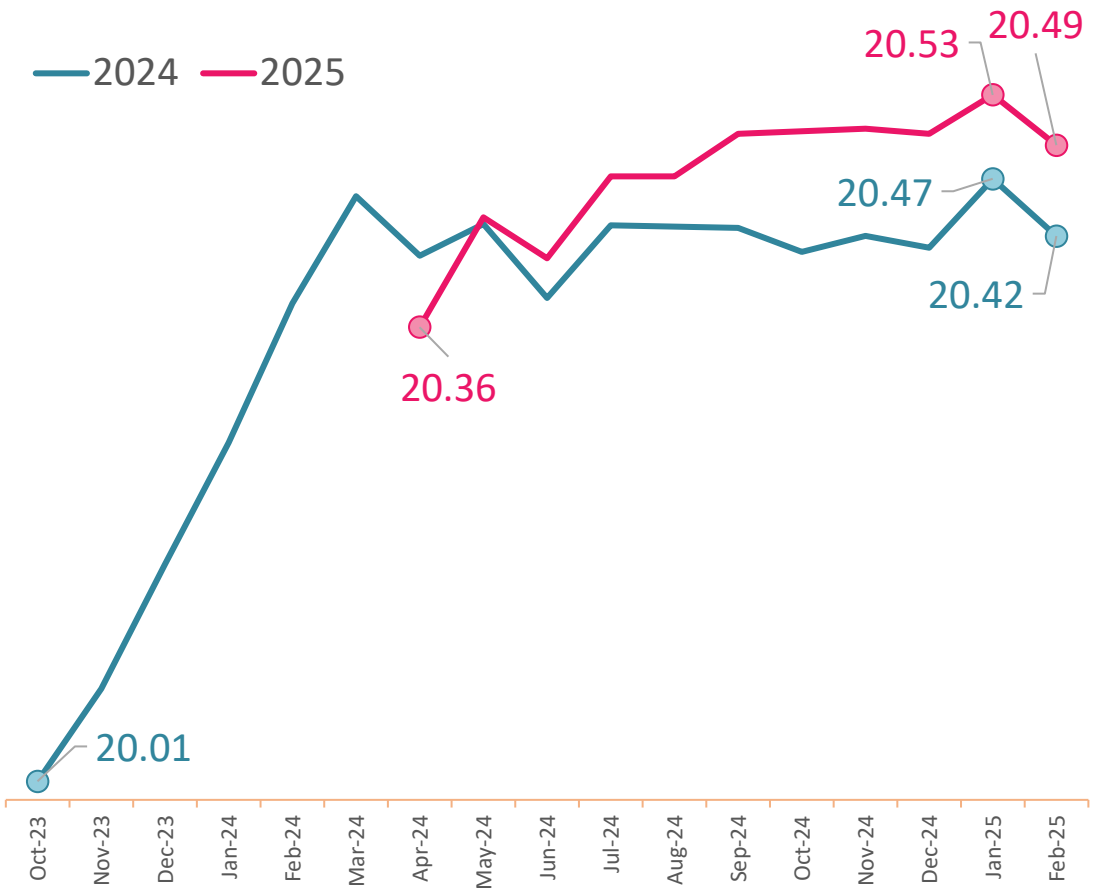


Source: IEA and Repsol Economic Research Department

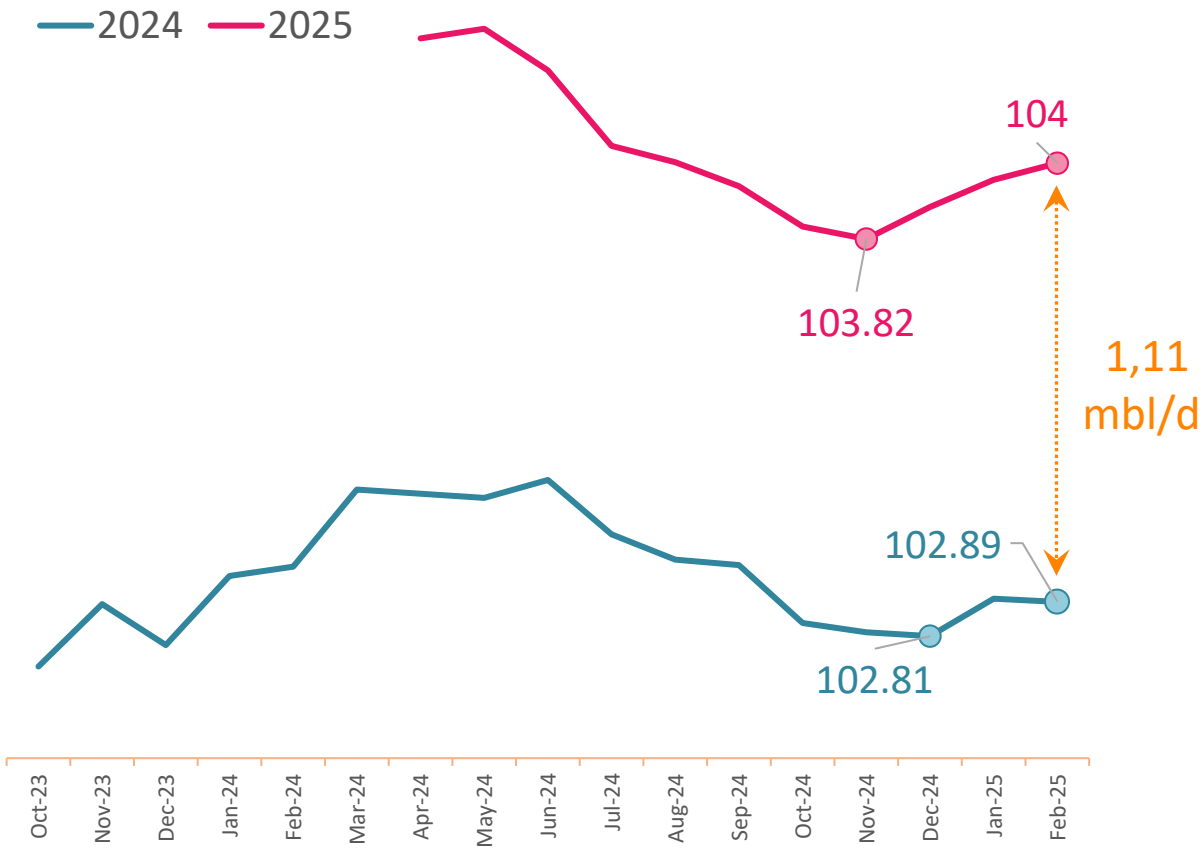
Are we seeing a change in our viewpoint on Oil Demand?

. Consequently, oil demand has proven to be more robust than anticipated, with global demand growth approximately at 1%. Does this indicate a structural shift towards a modest yet increasing demand? And not to a fall in demanda as forecast by the IEA, mainly due to the the penetration of EV´s

US demand outlook for different years, according to the IEA (mbl/d)



Global demand outlook for different years, according to the IEA (mbl/d)



Source: IEA and Repsol Economic Research Department

Are we seeing a change in our viewpoint on Oil Demand?

It seems that, similar to the situation in Europe, many manufacturers in the US are cancelling, delaying, or putting on hold the establishment of new EV battery factories. One factor contributing to this trend is the significant market transition from NMC (nickel-manganese-cobalt) batteries to LFP (lithium iron phosphate) batteries. Additionally, policy direction and customer dissatisfaction regarding performance are influencing these decisions.

EV battery plants under construction in the U.S.

Manufacturer	Localization	Capacity (GWh)	Status
ABF	Arizona	20	Cancelled
Ford	Michigan	35	Scaled down (-40%)
Kreisel	North Carolina	2	Postponed
Microvast	Kentucky	19	Paused
Our Next Energy	Michigan	20	Postponed
GM	Michigan	45	Postponed

Source: Rhodium Group, TechCrunch and Repsol Economic Research Department

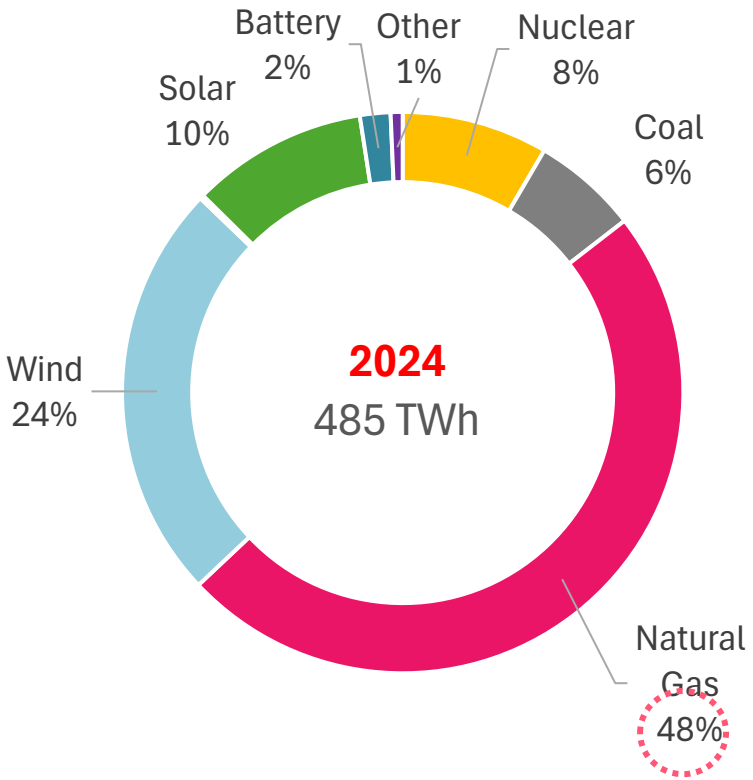
Contenido

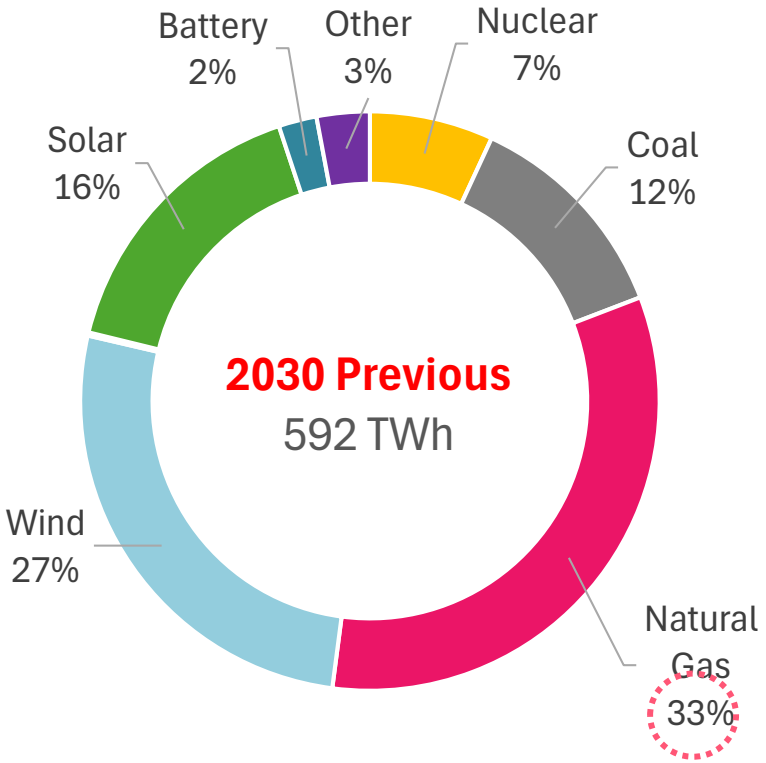
1. Are economics and energy indicators pivoting?
2. Are we seeing a change in our viewpoint on Oil Demand due to Policies?
3. What could AI's and Data Centers energy needs mean for gas demand?
4. Will Geopolitics bring a dramatic change in the renewable energy market?

What AI's energy needs mean for gas demand?

The energy requirements of data centers are altering the anticipated electricity mix in the United States. For instance, in Texas, it was projected six months ago that natural gas generation would decline in market share compared to renewable energy sources.

ERCOT Power Generation Mix: 2024 and 2030 (previous and current forecast)





ERCOT Generation
CAGR 2030 vs. 2024 = +3.4%

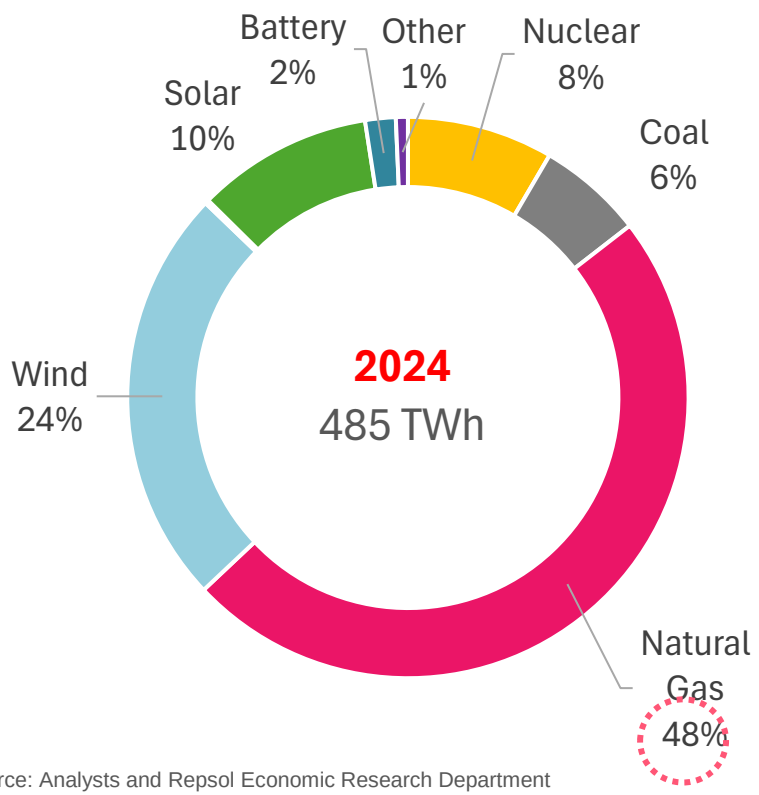
Natural gas
CAGR 2030 vs. 2024 = -3.1%

Source: Analysts and Repsol Economic Research Department

What could AI's energy needs mean for gas demand?

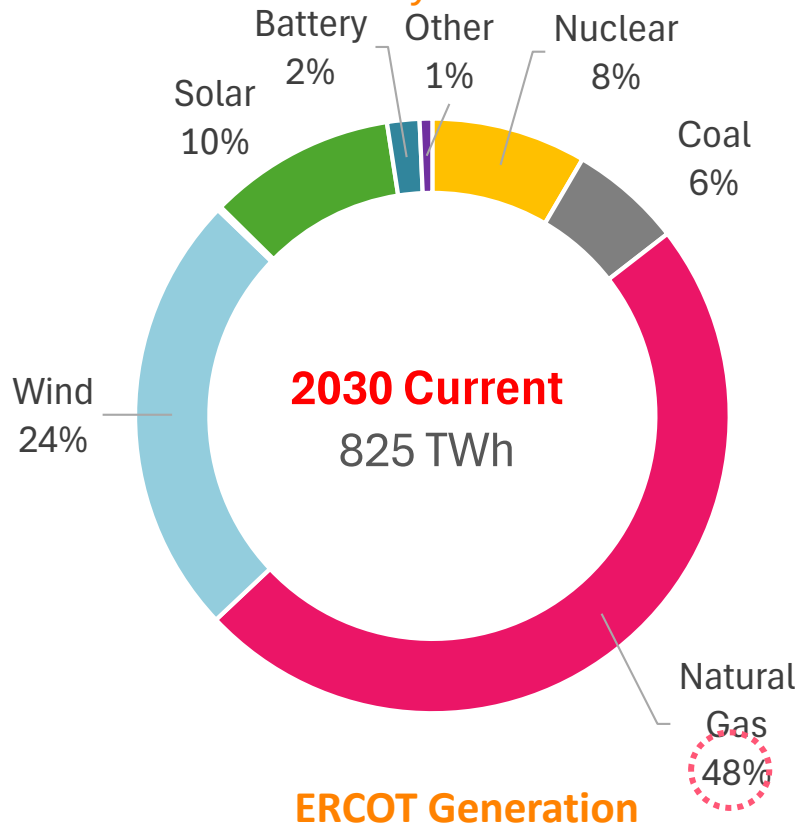
Analysts have adjusted their projections for the growth of natural gas-fired generation upwards. The consensus indicates a compound annual growth rate (CAGR) of 8-9%. Data centers are not entirely suited to intermittent energy sources, which suggests an increase in gas consumption and elevated gas prices. This trend is likely to be strengthened if the proposed energy policies are put into action.

ERCOT Power Generation Mix: 2024 and 2030 (previous and current forecast)



ERCOT Generation
CAGR 2030 vs. 2024 = +3.4%

Natural gas
CAGR 2030 vs. 2024 = -3.1%



ERCOT Generation
CAGR 2030 vs. 2024 = +9.3%

Natural gas
CAGR 2030 vs. 2024 = +6.1%

Source: Analysts and Repsol Economic Research Department

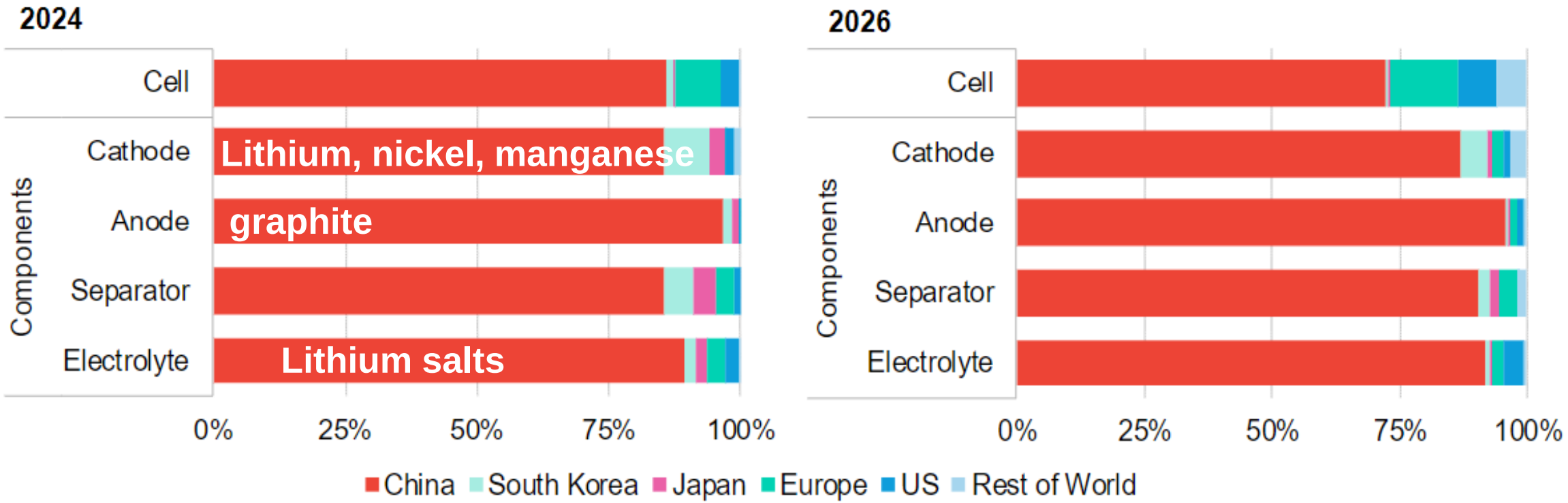
Contenido

1. Are economics and energy indicators pivoting?
2. Are we seeing a change in our viewpoint on Oil Demand due to Policies?
3. What could AI's and Data Centers energy needs mean for gas demand?
4. Will Geopolitics bring a dramatic change in the renewable energy market?

Geopolitics of batteries: China

The upstream battery value chain, particularly in the manufacturing of essential battery components such as cathodes, anodes, separators, and electrolytes, is heavily concentrated in China. Currently, approximately 86% of the global cathode processing capacity is located in China, while the figure for anodes is even more substantial at 97%. Although companies like BASF, Umicore, LG Chem, Panasonic, and various Chinese firms including Gotion and Huayou Cobalt are establishing component manufacturing facilities in the US and Europe, China is set to maintain its dominance in production capacity for these components.

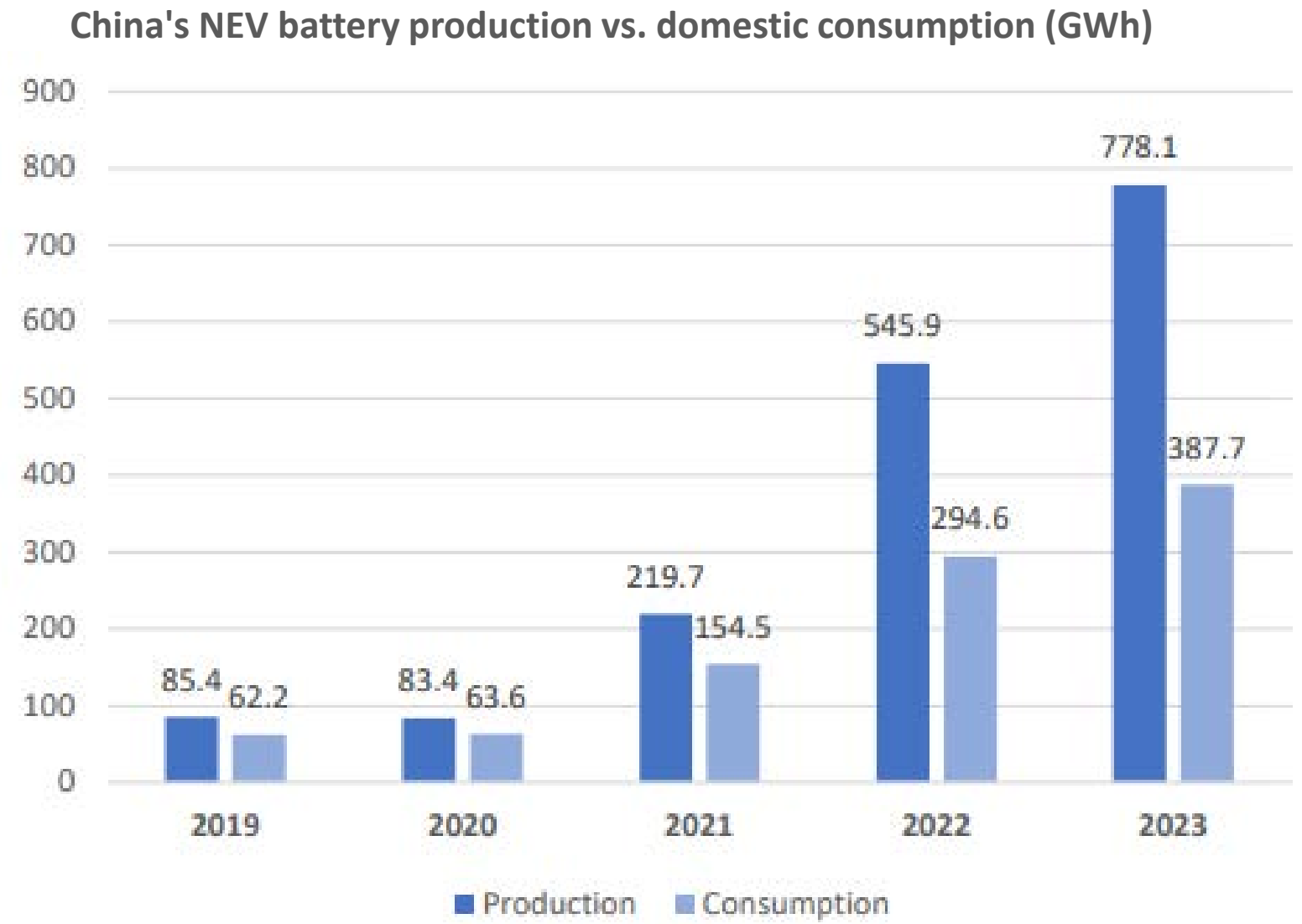
Geographic distribution of lithium-ion cell and component manufacturing capacity, by plant location region



Source: Bloomberg BNEF and Repsol Economic Research Department

The Geopolitics of minerals: China

There has been a rise in battery overproduction, with China exporting 152 GWh, of which 87% were automotive batteries, marking an increase of 85%.



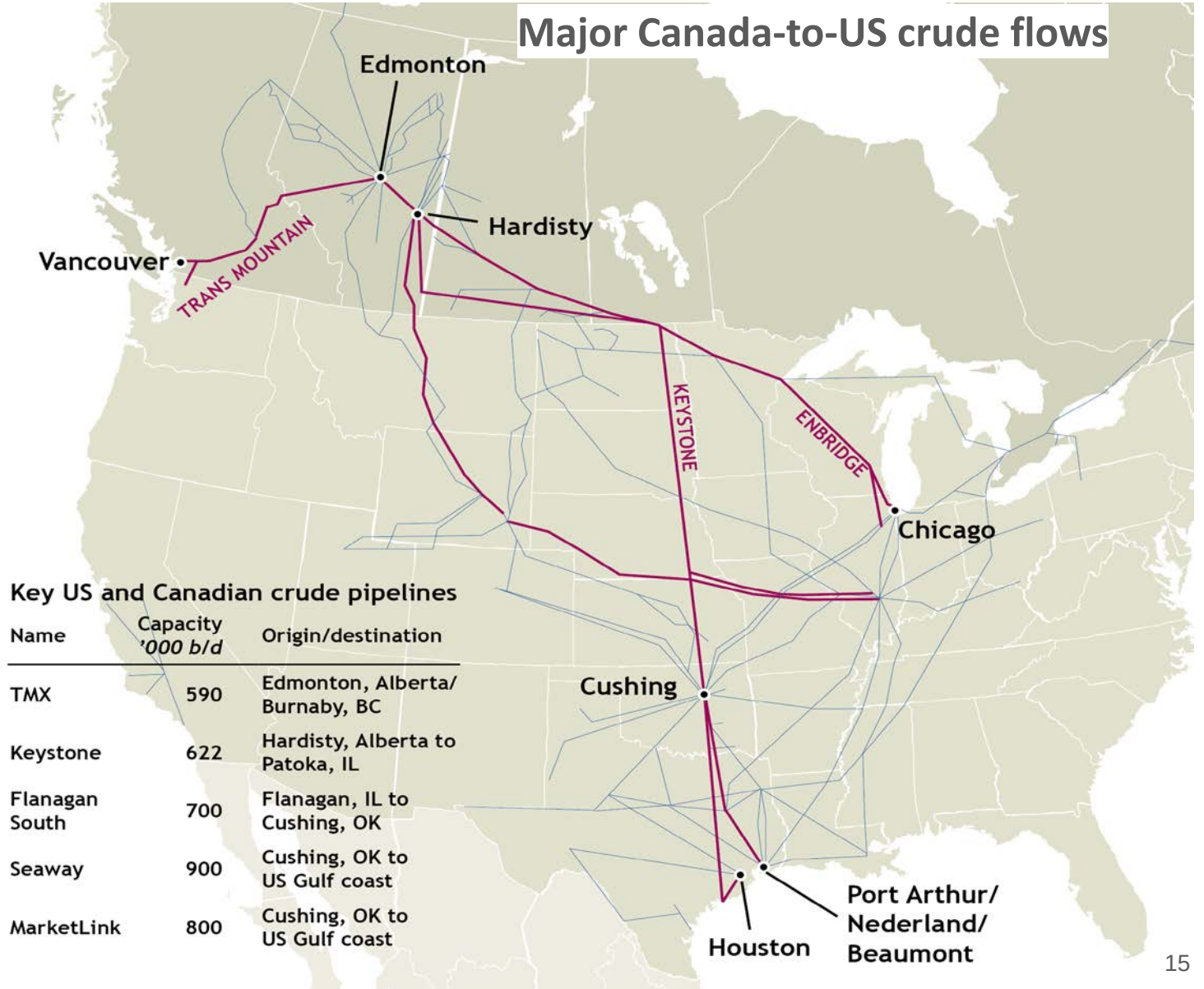
Source: Oxford Institute for Energy Studies and Repsol Economic Research Department

Tariffs and Oil and Gasoline prices in the U.S. Remember 2019

About 80% of Canada's 5 mbl/d of crude production flows downstream to US refiners, Any oil price increase due to tariffs will be at least partially passed through from the oil imported price to gasoline. The refining system needs these type of crude

In 2019, sanctions on Iran and Venezuela, plus the attack on Saudi Arabia oil facilities, took significant amounts of medium and heavy crude oil from the market. Shale oil could not have replaced them as the quality of the crudes was significantly different. What had already replaced them in the United States were Canadian tar sands. **It is the tar sands that continue to allow the United States to sanction Iran, Venezuela, and Russia. Not U.S. shale oil .**

. Moreover, the SPR can only serve some refineries in the Gulf Area. And not to Padd 2 and 4, so those parts of the US are not immune to a shortage of Canadian oil or to an embargo



Key US and Canadian crude pipelines

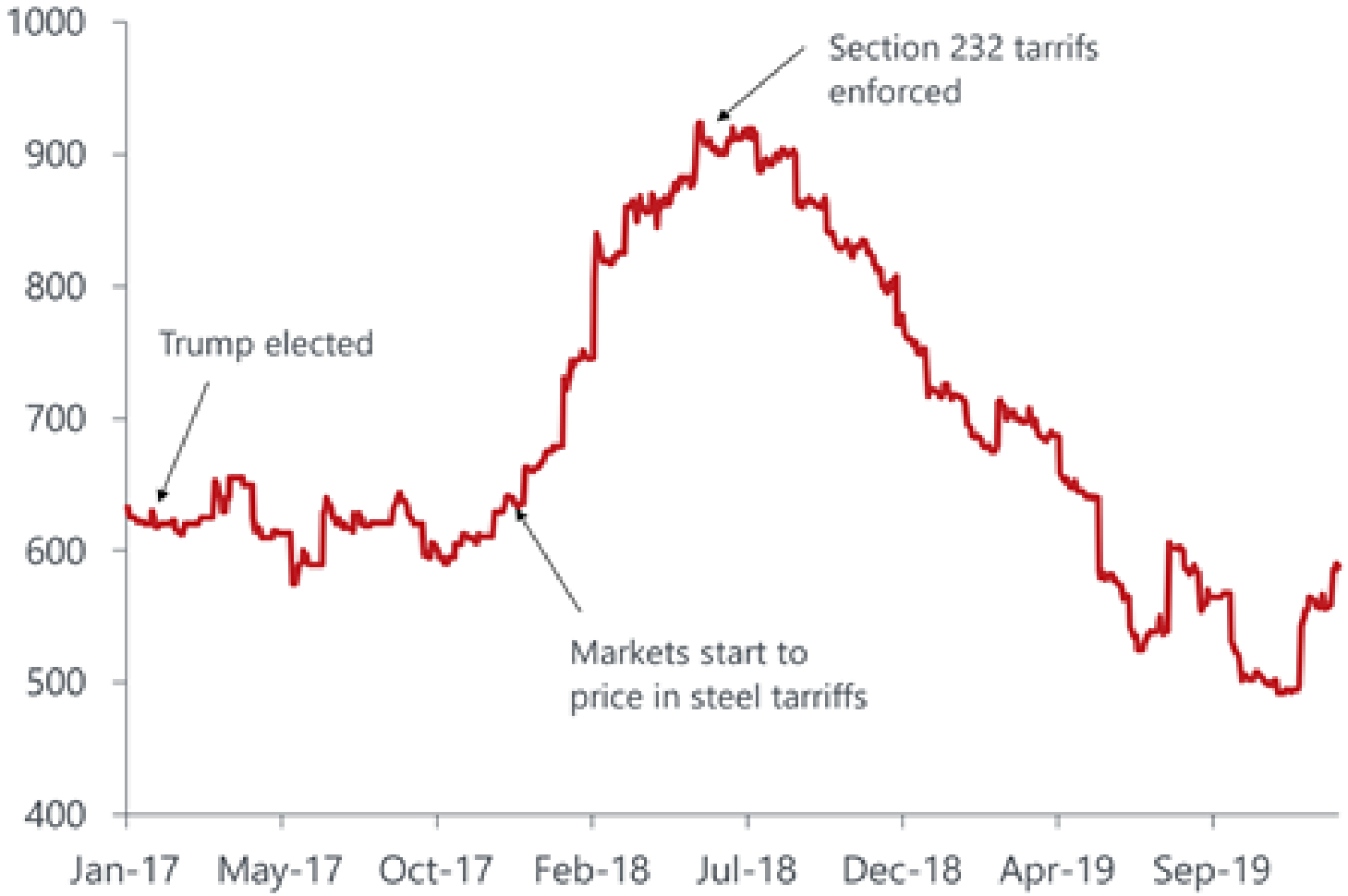
Name	Capacity '000 b/d	Origin/destination
TMX	590	Edmonton, Alberta/ Burnaby, BC
Keystone	622	Hardisty, Alberta to Patoka, IL
Flanagan South	700	Flanagan, IL to Cushing, OK
Seaway	900	Cushing, OK to US Gulf coast
MarketLink	800	Cushing, OK to US Gulf coast

Source: Argus and Repsol Economic Research Department

What lesson have we learnt from past tariff increases

At present, imports account for approximately 25% of steel consumption in the U.S., and with capacity utilization standing at about 75%, there is some potential to boost production, although it won't be sufficient to completely eliminate the need for imports. The 2018 tariffs experience, where the U.S. imposed a 25% tariff on steel and a 10% tariff on aluminum, resulted in a 34% increase in steel prices, which subsequently led to a 10% rise in domestic steel production in the fourth quarter of that year. However, in 2019, elevated costs diminished demand, resulting in a 27% decline in steel prices and a 4% drop in production,.

Hot-Rolled Coil (HRC) Steel Price in the U.S. and the Impact of Section 232 Tariffs. USD per ton



Source: OE and Repsol Economic Research Department

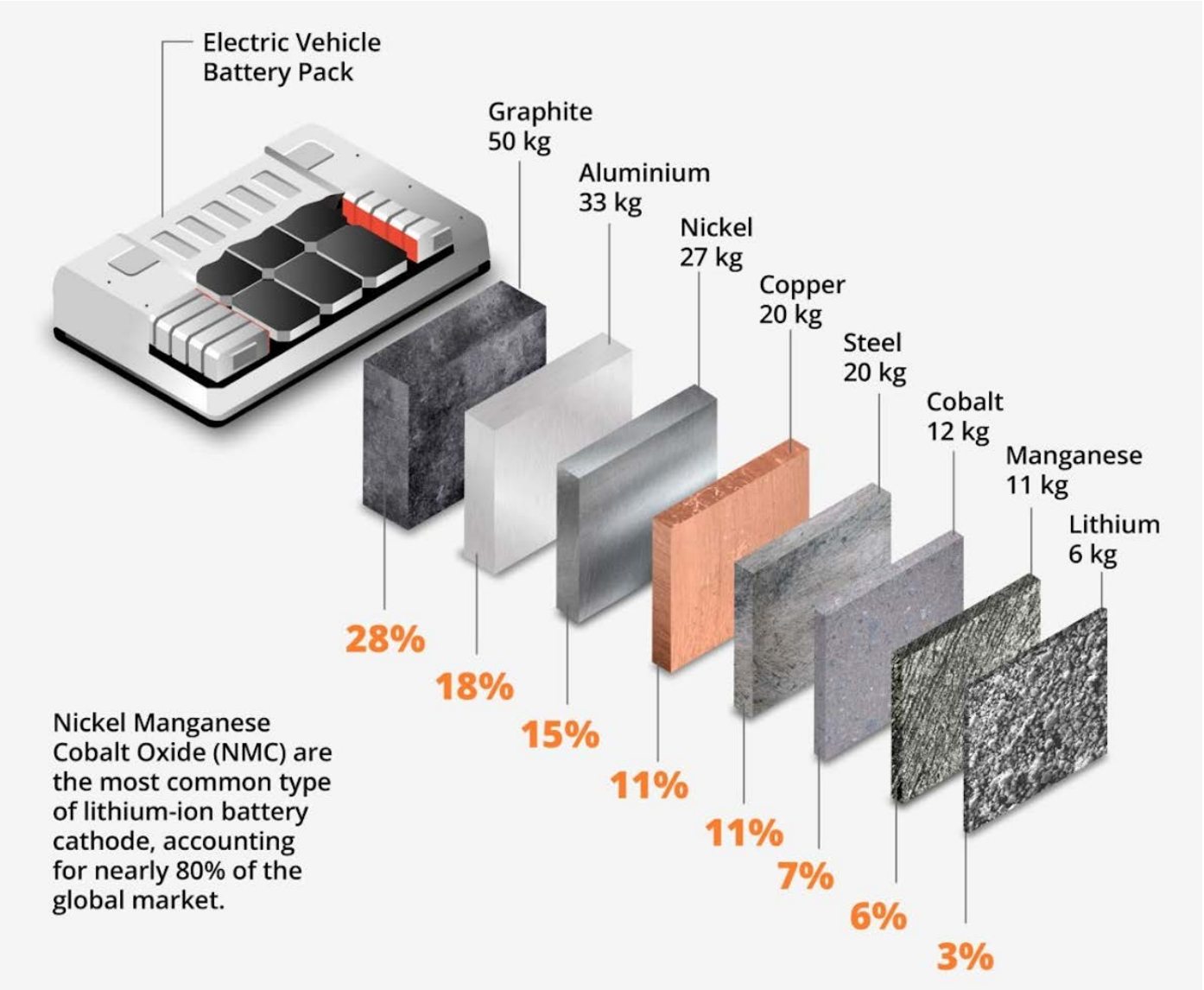
Thank you!

[Repsol Annual Energy-Statistics]

Key batteries for electric vehicles and intermittent energy sources are highly material and energy-intensive.

In addition to rare earth elements, this category includes graphite, aluminum, nickel, and steel, with a particular emphasis on various forms of graphite.

Average composition of NMC lithium-ion batteries



Source: Transport & Enviroment