

MED & Italian Energy Report

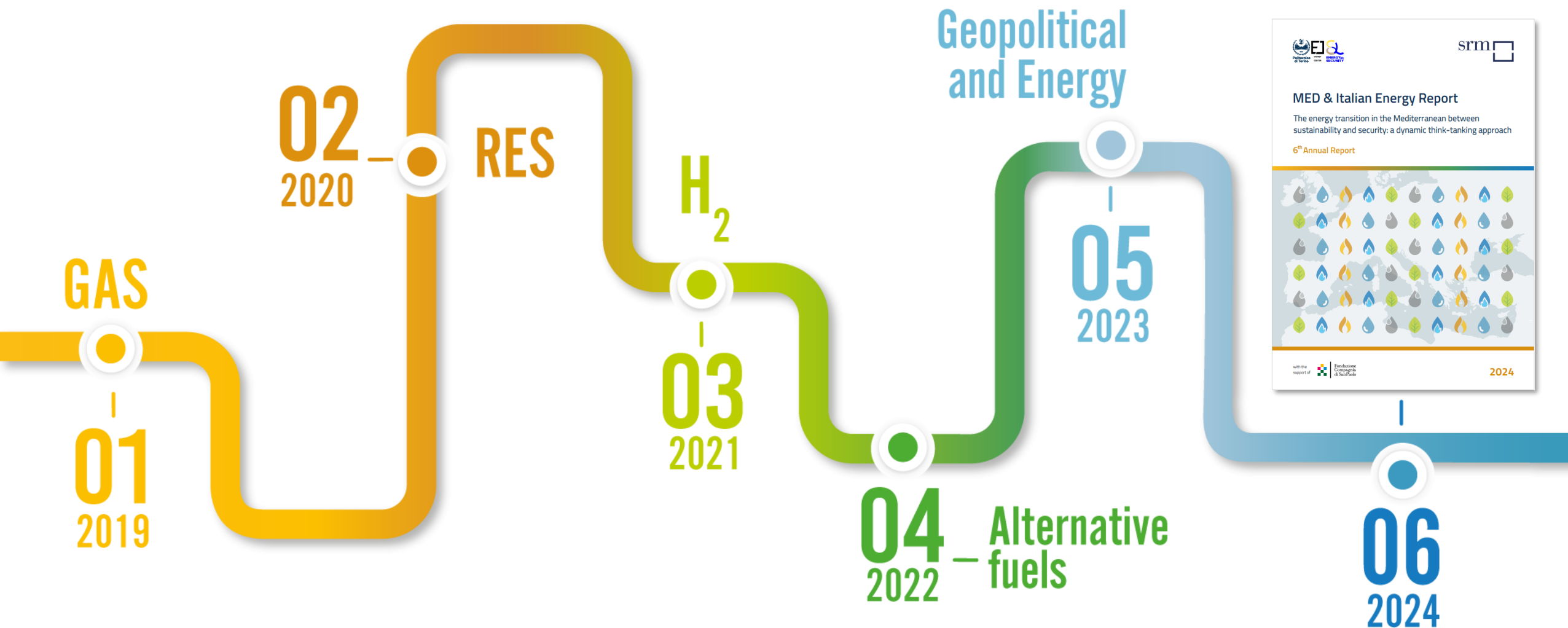
Presentation of the 6th edition

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28th January, 2025 | European Parliament | ASP 3H1 | Brussels



The energy transition in the Mediterranean between sustainability and security: our new Annual Report and an innovative interactive platform to analyze energy issues



Agenda

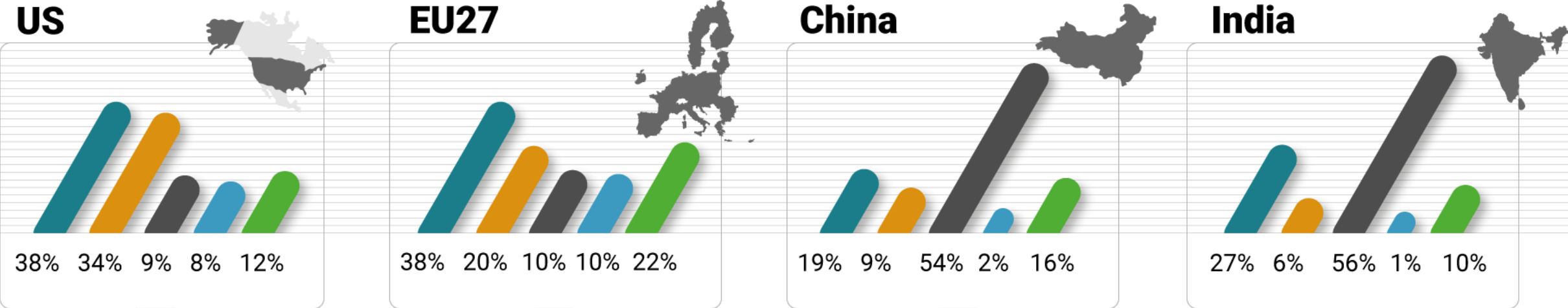
-  Key figures of EU energy dependence and the energy mix
-  Energy Security and affordability
-  Maritime chokepoints and the new role of ports as energy hubs in the Mediterranean

Energy consumption to GDP: EU more efficient than US; China the biggest consumer

Primary energy consumption by fuel (2023, Exajoule)

Source: SRM on British Petroleum Data, 2024

Oil Natural Gas Coal Nuclear Renewables



Total Final Consumption (2023, Exajoules)

94.3

56.4

170.7

Top 3 energy areas

GDP

\$27.7 Trillion

\$18.6 Trillion

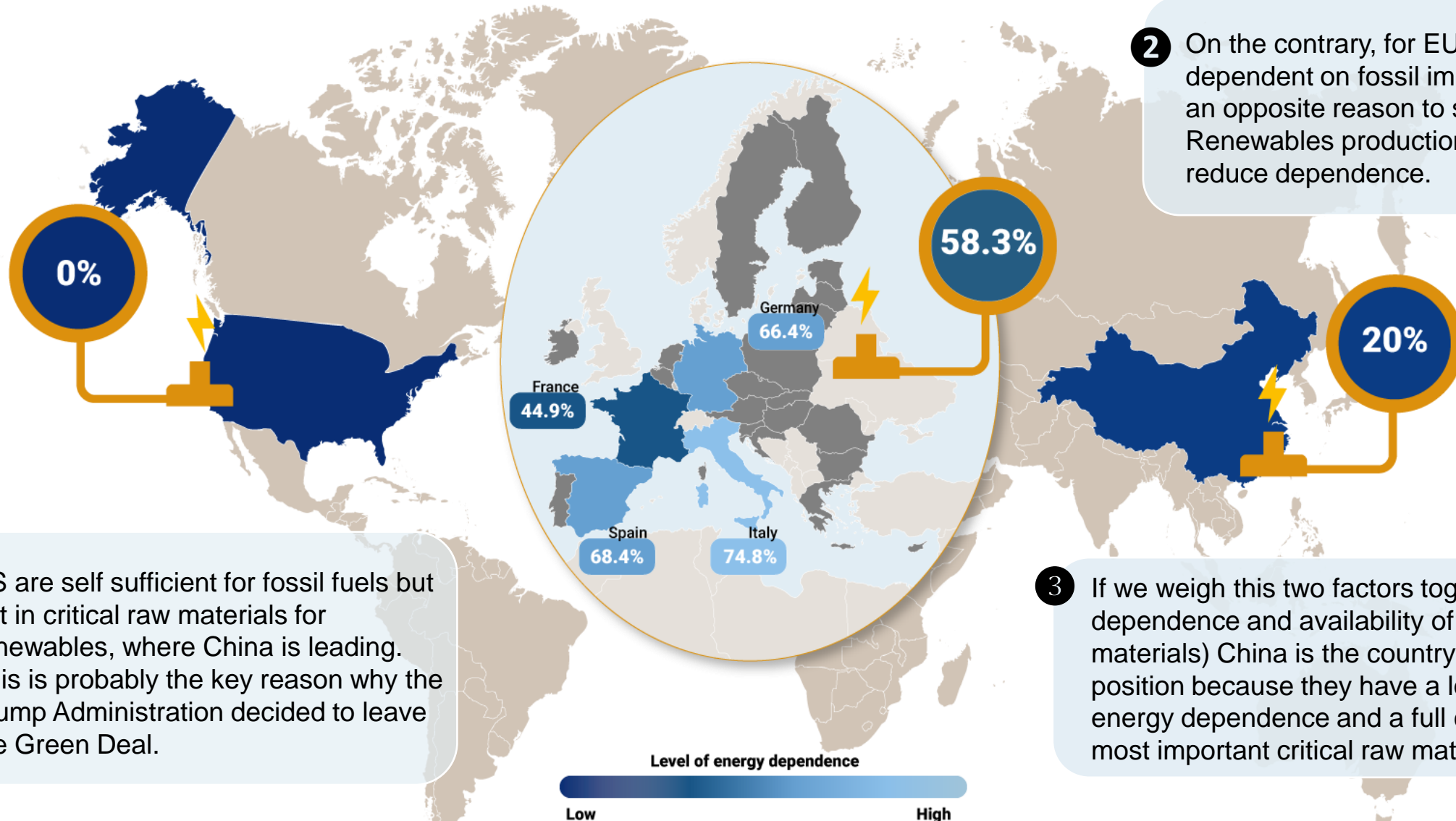
\$17.8 Trillion

Europe has the best energy consumption-to-GDP ratio, consuming far less energy than China and also a little less – in proportion to GDP – than the US. Europe still is on the road of sustainability also in terms of energy saving and efficiency.

Source: SRM IMF – WEO Database, 2024

High energy dependence is a threat to security and geopolitical competition

Source: SRM on EUROSTAT and IEA Data, 2025



1 US are self sufficient for fossil fuels but not in critical raw materials for renewables, where China is leading. This is probably the key reason why the Trump Administration decided to leave the Green Deal.

2 On the contrary, for EU so largely dependent on fossil imports, there is an opposite reason to strengthen Renewables production as a way to reduce dependence.

3 If we weigh this two factors together (energy dependence and availability of critical raw materials) China is the country with the best position because they have a lower level of energy dependence and a full control over the most important critical raw materials.

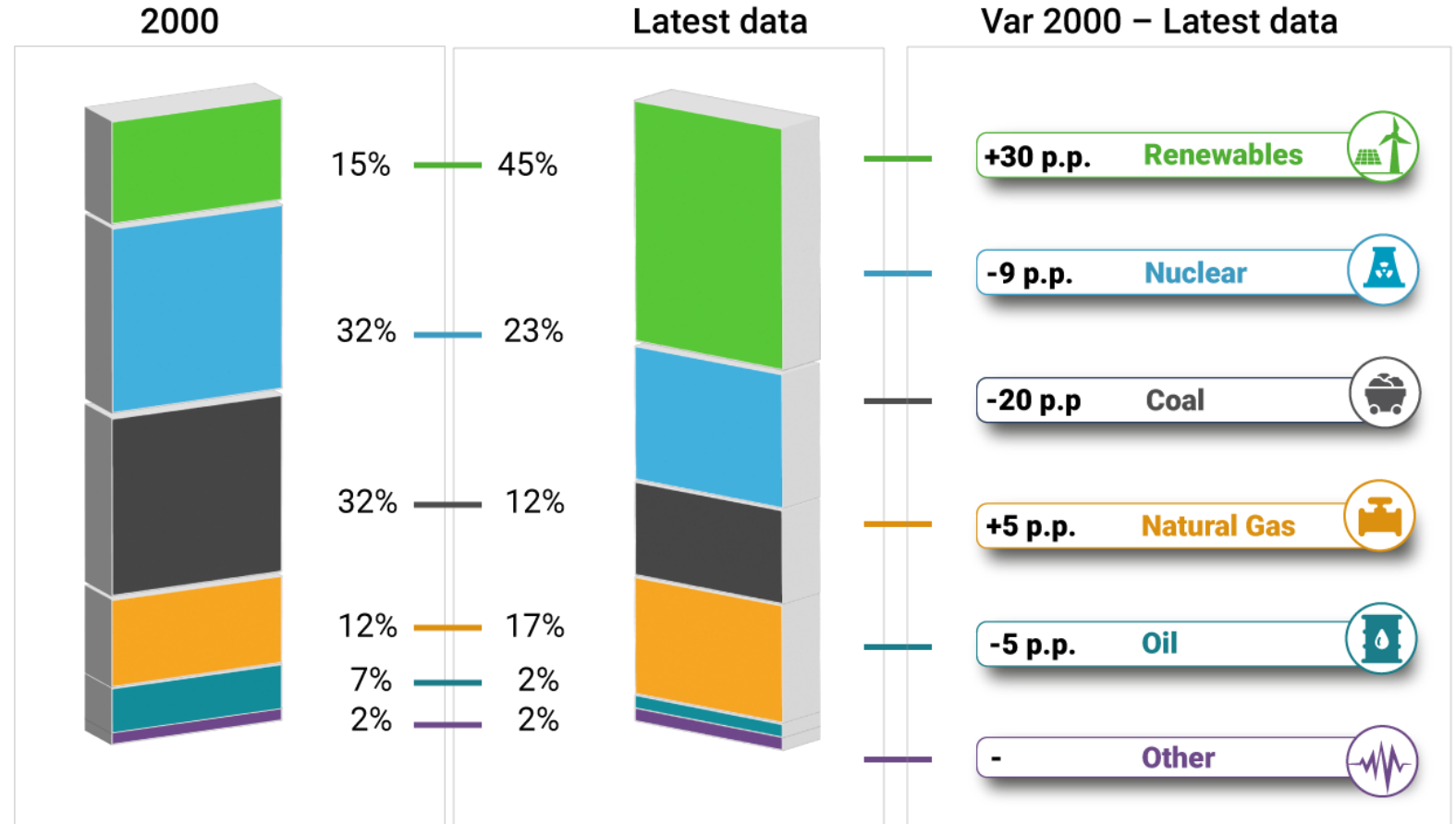
EU electricity production mix: renewable expansion has been considerable

- The electricity generation mix in the EU has changed over more than two decades: the use of oil and coal has declined, while natural gas has increased because (being a fossil fuel with the lowest emission) it has been conceived as a buffer to support energy transition.
- In the meantime, EU renewable electricity pace of expansion has been considerable, and it is expected to more than double by 2030.

COP 28 climate summit:

Tripling installed renewable power capacity and doubling the rate of energy efficiency improvement by 2030 are crucial milestones in the pursuit of the 1.5°C target.

Electricity generation by fuel (TWh)

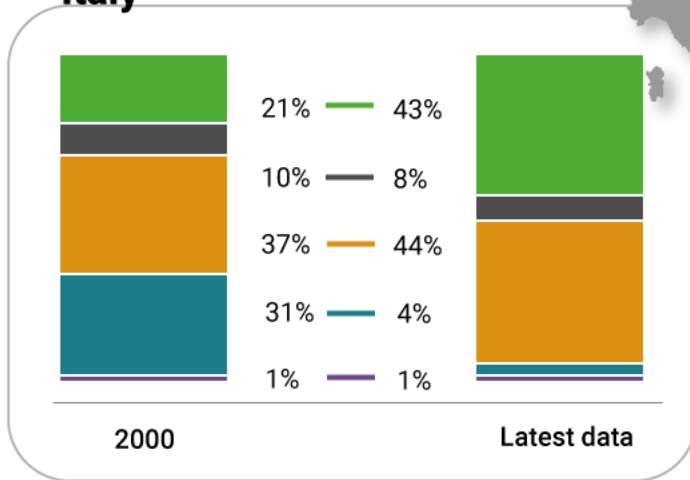


Source: SRM on British Petroleum Data, 2024

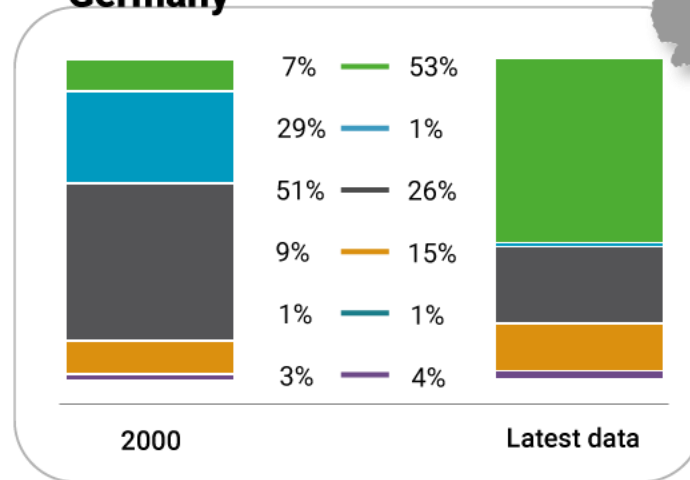
Electricity generation mix: Italy vs main partners

TWh

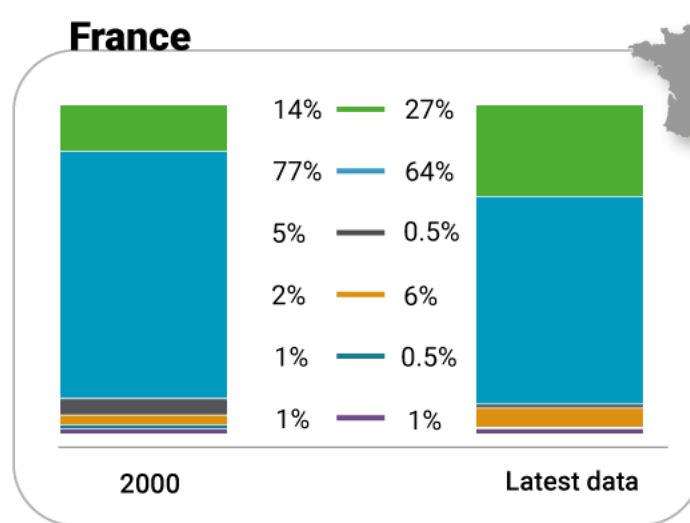
Italy



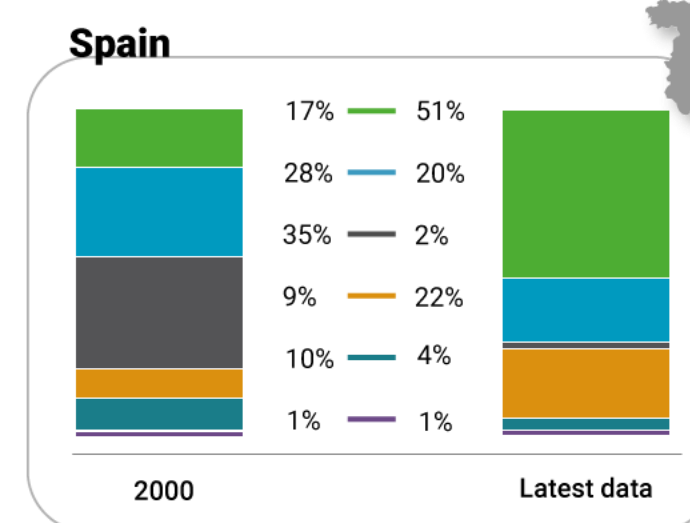
Germany



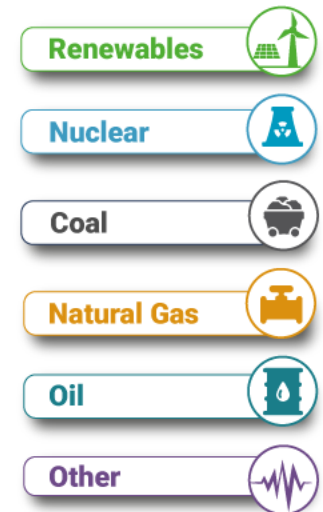
France



Spain



- **Italy:** significant use of gas and renewables. Nuclear not used.
- **Spain:** the most balanced fossil mix and a high percentage of renewables.
- **Germany:** still significant use of coal and highest renewables.
- **France:** significant use of nuclear; low contribution of gas and renewables less developed than other countries.



Legenda

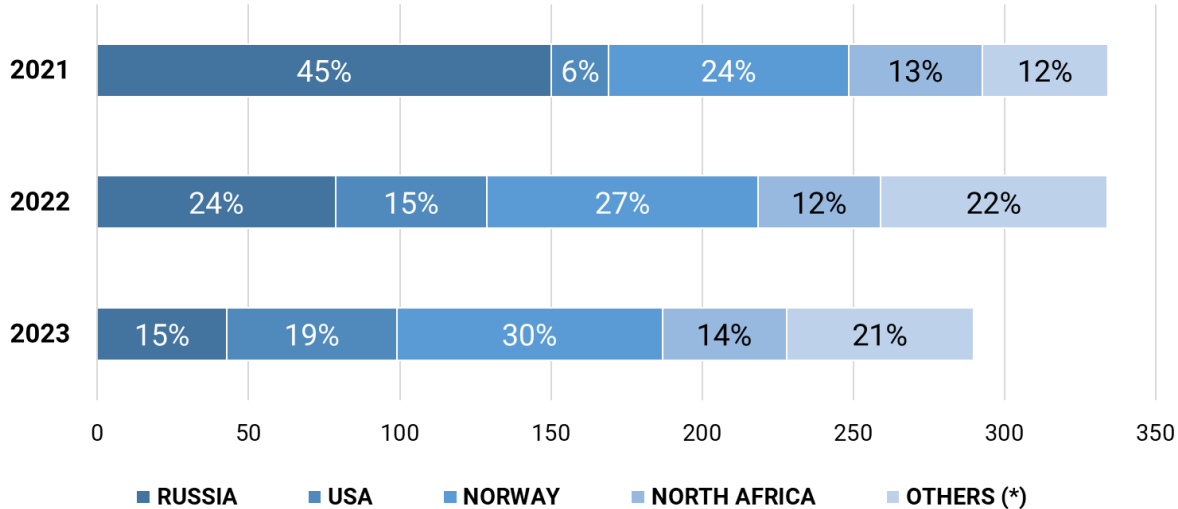
The war in Ukraine increased the attention on energy security and affordability. ...The new era of Trump will impact geopolitical balances

If we compare the EU gas import situation in 2021 with the situation in December 2023, we see that: EU imports of gas from Russia considering pipelines and LNG import (not subject to sanction) fell from 45% to 15%. Considering only the gas import via pipeline the share has become almost negligible.

These reductions have been mainly offset by other countries including Norway, Algeria and Others like US and UK for LNG.

- The **Trump's MAGA (Make America Great Again)** will have major impacts on energy geography and geopolitical balances related to energy commodity trade.
- **Under Trump, the push to sell more U.S. oil and gas to Europe will increase.** Over the past few years, **Europe has already ramped up its LNG imports from the United States.** While these accounted for **27%** in 2021, the share grew to **41%** the following year, reaching **almost 50%** of total LNG imported by Europe in the early months of 2024.

EU Partner countries for pipeline gas + LNG supply



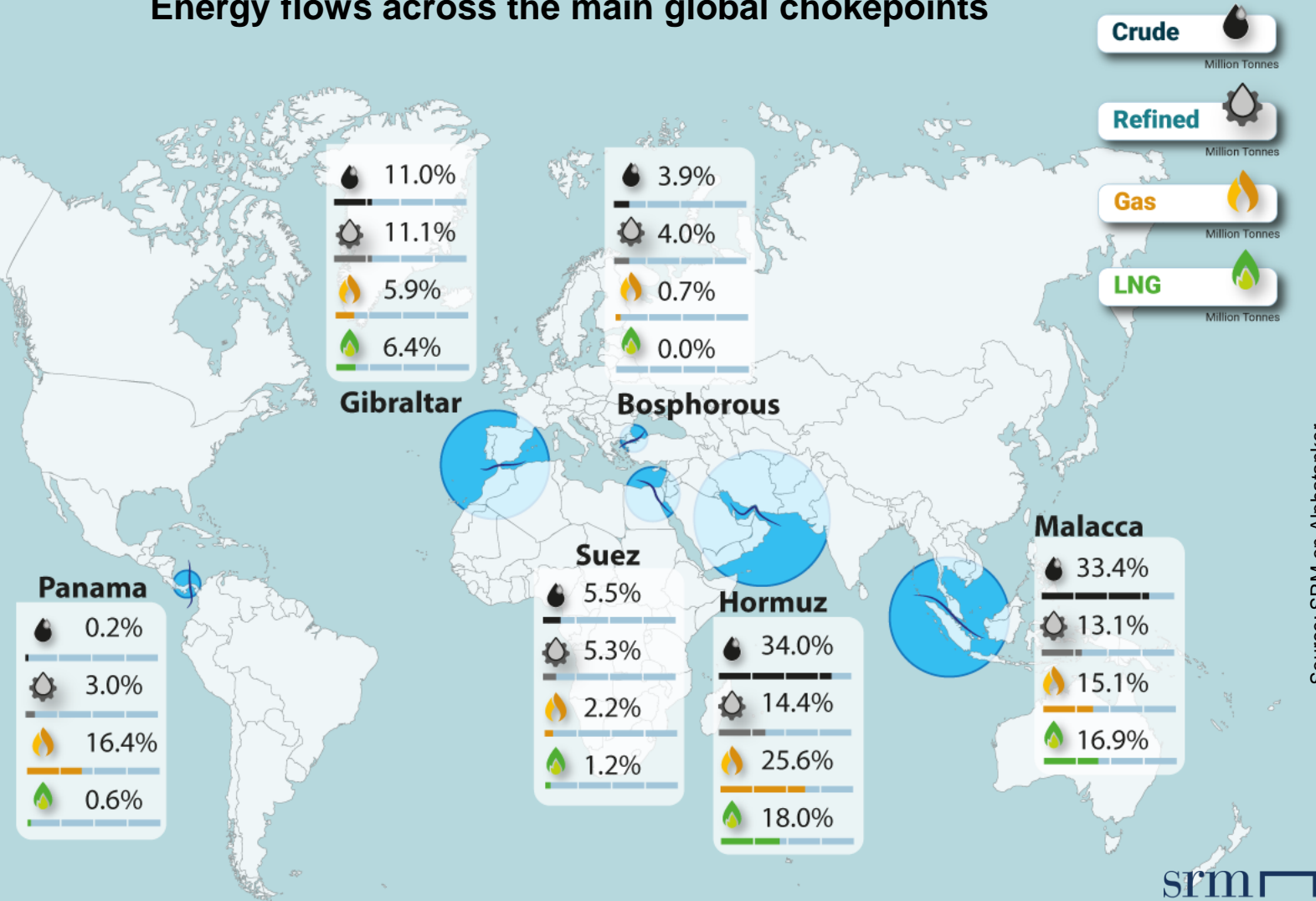
Source: SRM on European Commission



An overview on chokepoints as key passages for global energy trade

- The **Strait of Hormuz** is particularly important for energy, with **27% of the global oil and gas trade**.
- About **33.5% of crude oil trade passes through the Strait of Malacca**.
- Strategically linking Europe and Asia, **the Suez Canal** represents one of the most critical sea routes for global trade. The Canal's location makes it a key regional hub for the transport of crude, oil and gas which fell from 10% of oil products and 8% of LNG maritime flows before the crisis to 5% of total oil trade and 1.2% of LNG currently.
- Due to Houthi attacks, maritime trade flows through the Red Sea have decreased dramatically: **LNG carrier transits through the Suez Canal decreased by 90%; oil tanker transits are down by 40-50%.**
- The recent ceasefire in the area is expected to gradually **bring the Suez Canal traffic to normality**

Energy flows across the main global chokepoints



Source: SRM on Alphatanker

Ports are turning into energy hubs, essential for boosting the dialogue among the Mediterranean shores

Ports are crucial in the energy supply for fossil sources

located close points for oil & gas pipelines.

normally host the petrochemical industry plants.

are locations for LNG storage and/or production.

can contribute to global energy transition pathway with the development of new energy infrastructure, such as **LNG terminals** and **bunkering facilities** for alternative fuels.

BUT, Ports are also key for green energy transition:

Renewables production:

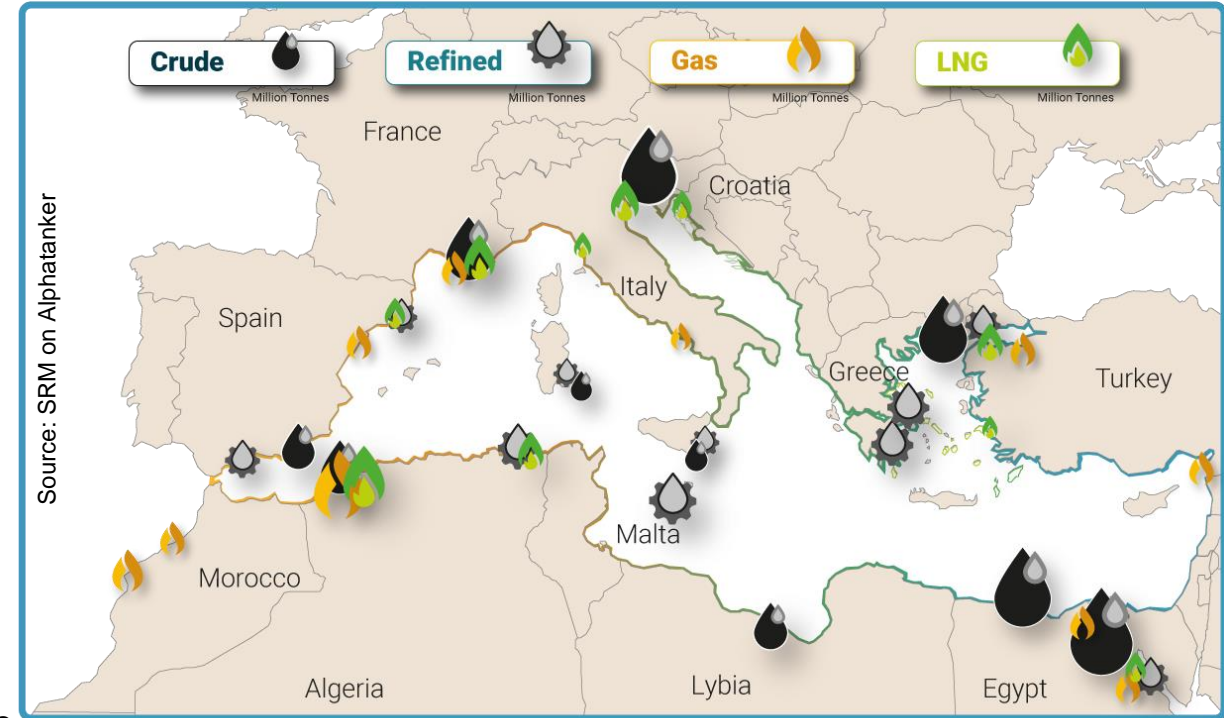
many ports in the **Med** area are **implementing solar** and **wind energy production** also using offshore plants;

Alternative fuels:

7.6% of the current fleet and **52.6% of the order book** will use **alternative fuels**. Port are also suitable locations for production, storage and trade of **green hydrogen**.

Estimates, survey, scenarios on Ports:

- Authoritative **estimates** from the **ESPO** (European Sea Port Organization) have shown that **sustainability will be the strategic driver** of European port investments over the next **10 years**.
- A **survey** conducted on **173 port** authorities across **85 countries** showed that over **90% of ports** are **planning investment** for infrastructure and sustainability.
- Additionally, about **1/3 of ports** are **planning to** allocate **space** for renewable energy production, while **13%** will expand existing energy production facilities.

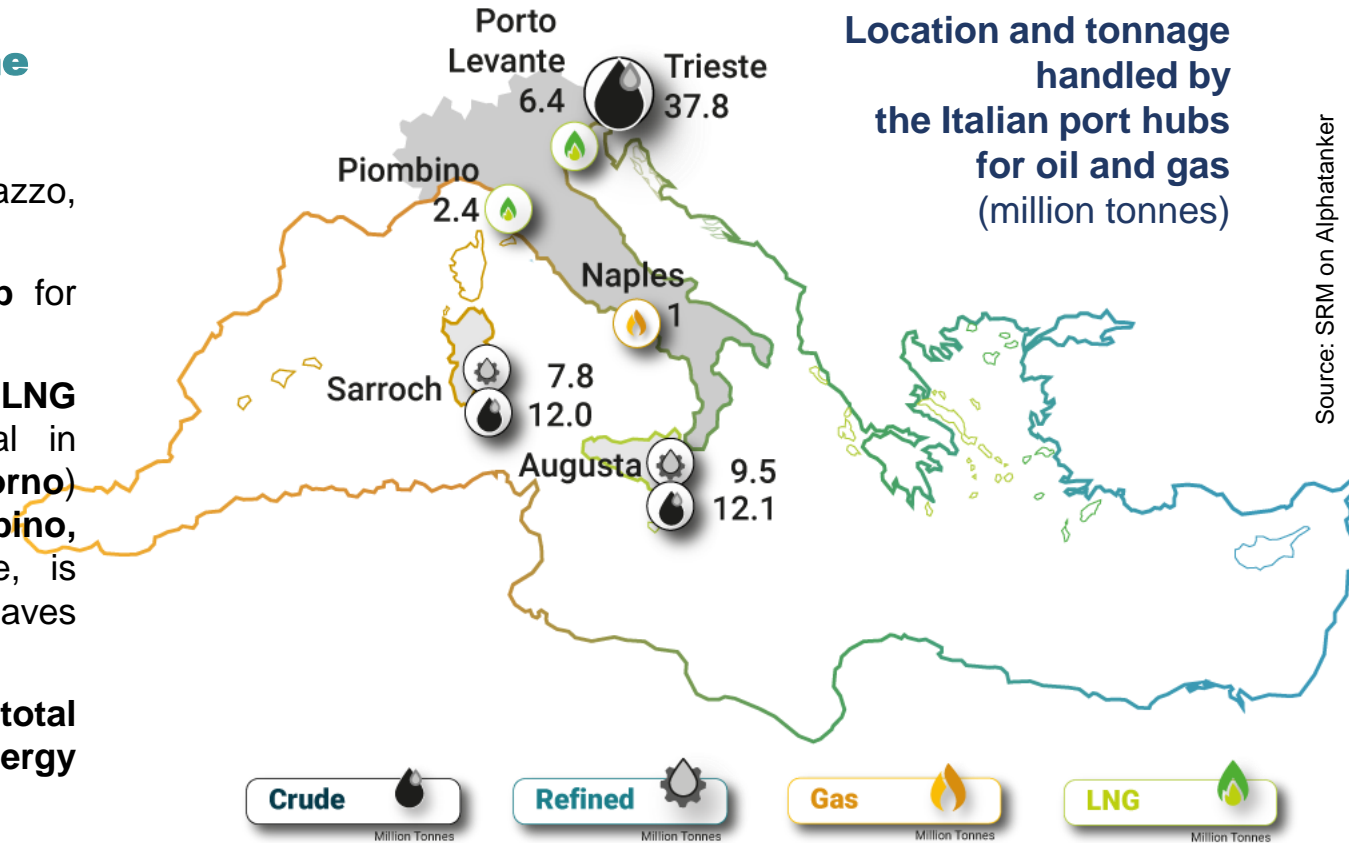


- **For these reasons ports** are also playing a crucial role to support energy transition in the shipping industry

Italy at the forefront of the development of a new port model as energy hub

Italian ports play an important role, especially in the trade of oil products and petrochemicals.

- The top 5 Italian energy ports (Trieste, Cagliari, Augusta, Milazzo, and Genoa) account for **almost 70% of the traffic**.
- Trieste (38 million tonnes of oil) is an **energy strategic hub** for Austria, Hungary and Bavaria.
- Italy has **increased the utilization of its three existing LNG terminals** (Adriatic LNG near **Rovigo**; Snam LNG terminal in **Panigaglia** near La Spezia; OLT Offshore LNG Toscana near **Livorno**) and has **made a new terminal**, the Golar Tundra in **Piombino**, operational. Additionally, a **new FSRU**, the BW Singapore, is scheduled to become operational near **Ravenna** in 2025. This leaves Italy far better prepared compared to February 2022.
- **Southern Italy**, handling **approximately 50% of the country's total port traffic**, plays a **key role in the transition to a "green" energy future**.



Ports are facing challenges as key drivers of the energy transition toward cleaner and more sustainable sources.

- By adopting greener energy sources in their operations, **ports can improve energy efficiency and significantly cutting emissions**.
- The proximity to potential renewable production areas in North Africa and the **investments in sustainable infrastructure and logistics offer to our ports a crucial opportunity to enhance cooperation with North Africa, strengthening Italy's position in the Mediterranean**.

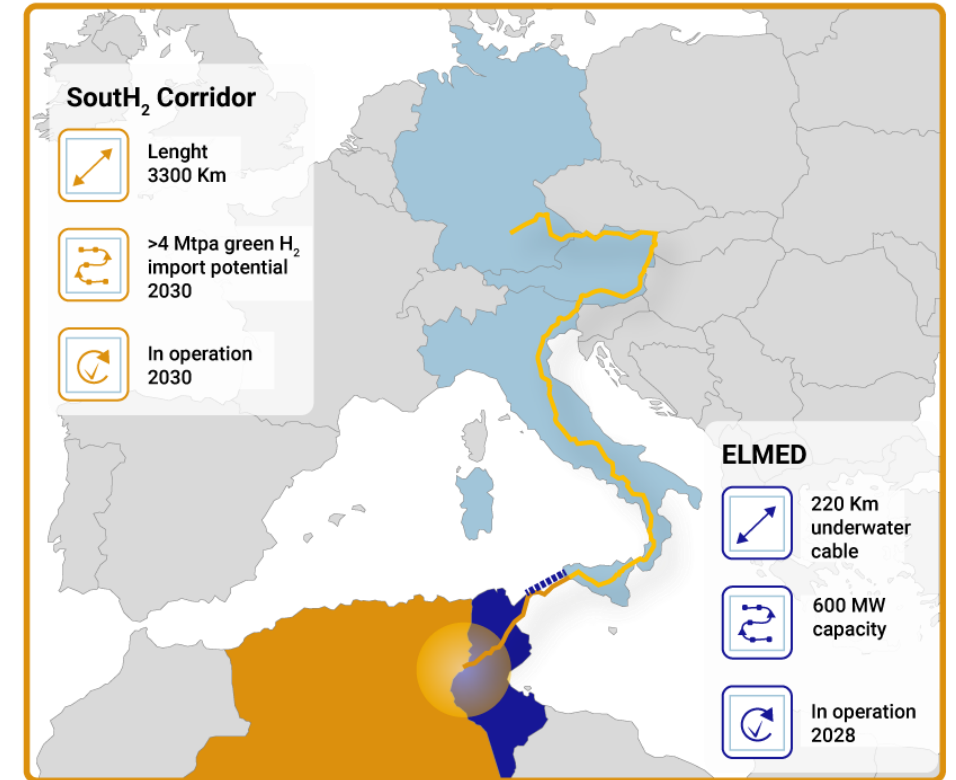
Challenges ahead: reinforcing the Euro-Mediterranean energy cooperation

Exploitation of the significant renewable potential in North Africa, especially for solar and wind energy. Considering solar electricity generation, less than 1% of the surface area of the countries of North Africa would be sufficient to generate enough electricity not only for their needs but also to produce a surplus to export to Europe. Currently the situation is the contrary: 81.9% of solar and 82.5% of wind installed capacity is in the European side of the Mediterranean.

Multicommodity approach: integration among RES, hydrogen, geothermal and alternative fuels is the pathway.

Creation of a Trade of renewables energy across the Mediterranean through electricity highways; existing gas pipelines for green hydrogen and synthetic gas; maritime routes to ship biofuels and liquid synthetic fuels to EU ports.

The recent strategic pact between Italy, Albania and the UAE, but also the project of the **SouthH₂ Corridor** or the new grid electricity connection **ELMED** between Tunisia and Italy, are all examples of a new energy infrastructures diplomacy that strengthen dialogue between the Mediterranean's shores and is an additional step to position Italy - in the framework of "Piano Mattei" - as an energy hub between Europe and Africa.





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