



RystadEnergy

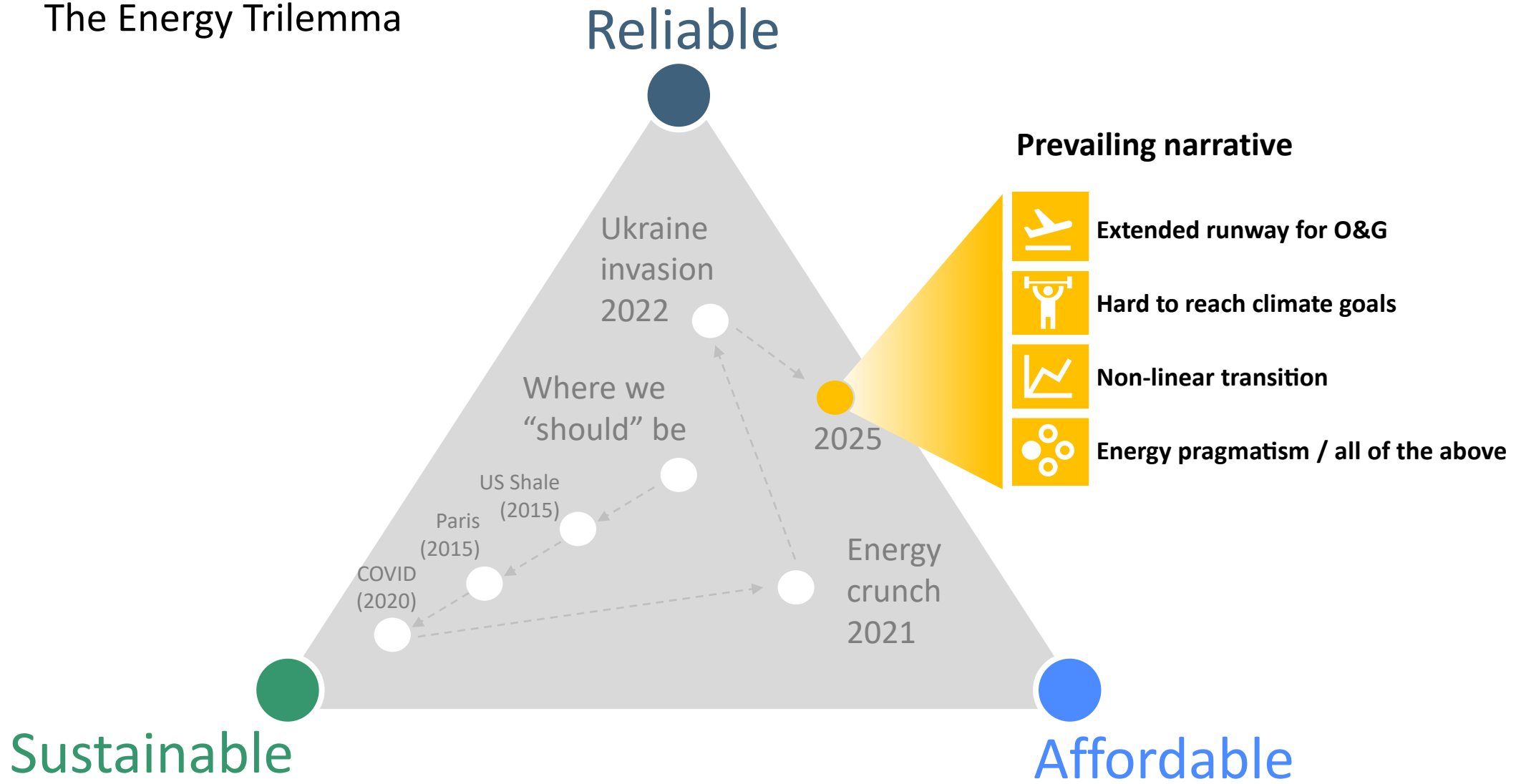
The Road to Net Zero in CEE: Tackling Technical, Commercial and Geopolitical Hurdles

Go Net Zero Conference: Budapest 2025

April 1, 2025

Iben Füst Frimann-Dahl, Advisory Partner

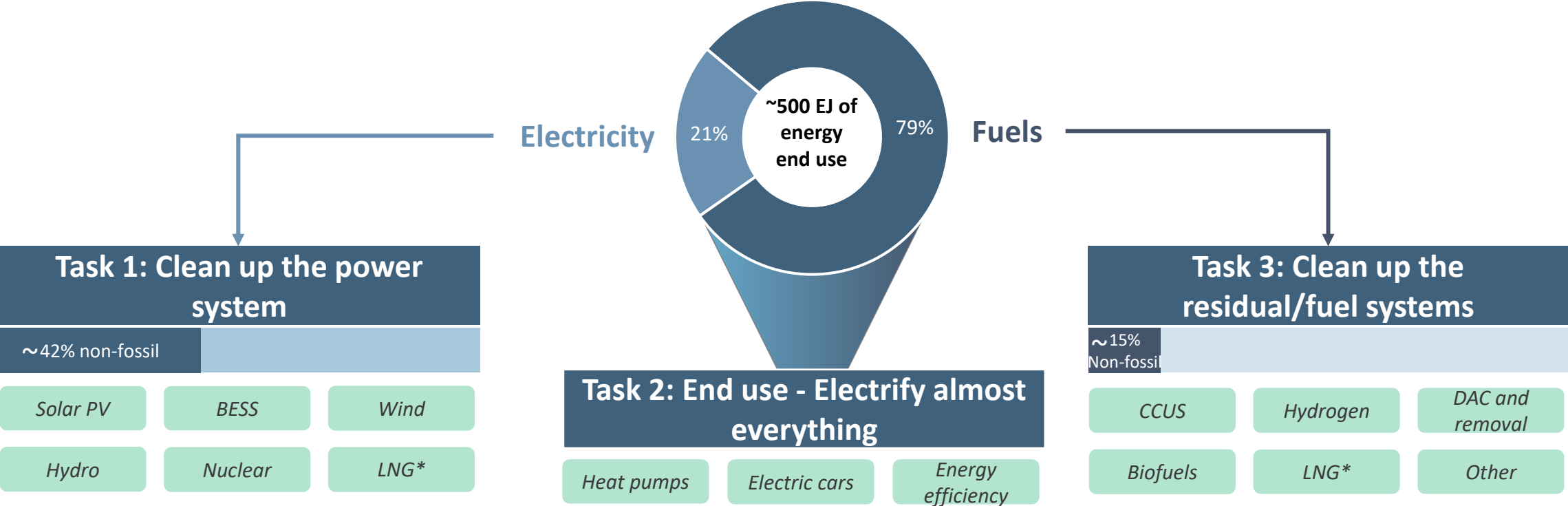
The Energy Trilemma



Source: Rystad Energy research and analysis

The road to a decarbonized energy market: Clean up the power system, electrify and clean up the residual/fuel system

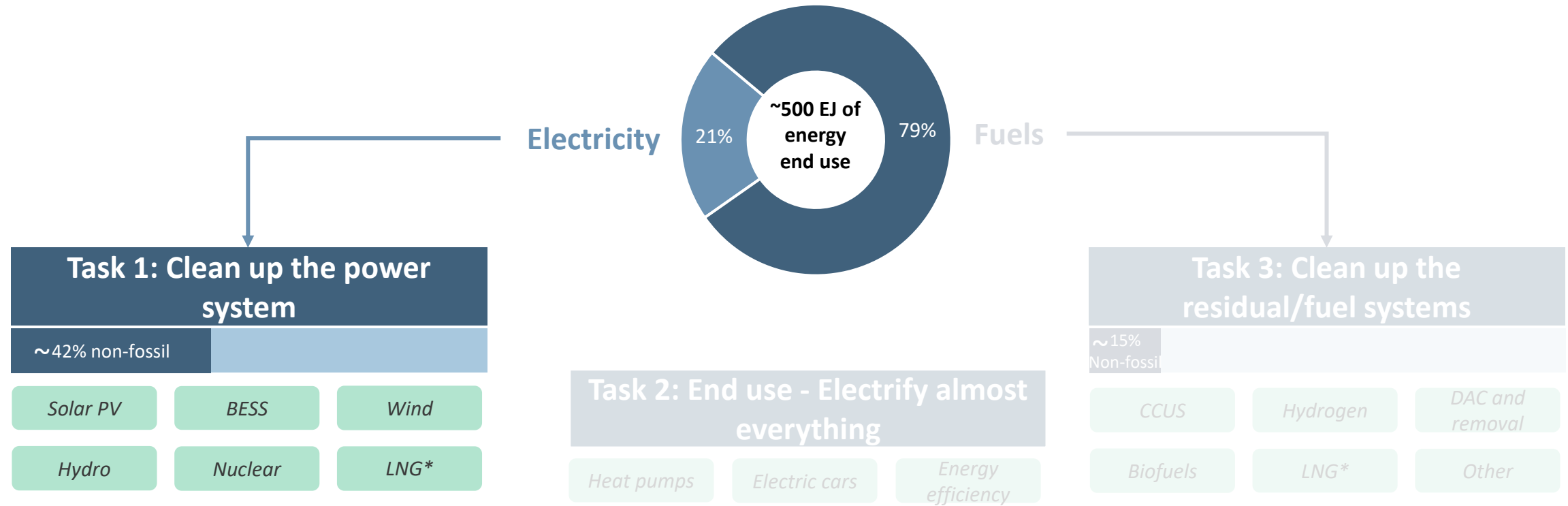
Three verticals to decarbonize the global energy system



* LNG can serve as a transition fuel towards net zero
Source: Rystad Energy research and analysis

The road to a decarbonized energy market: Clean up the power system

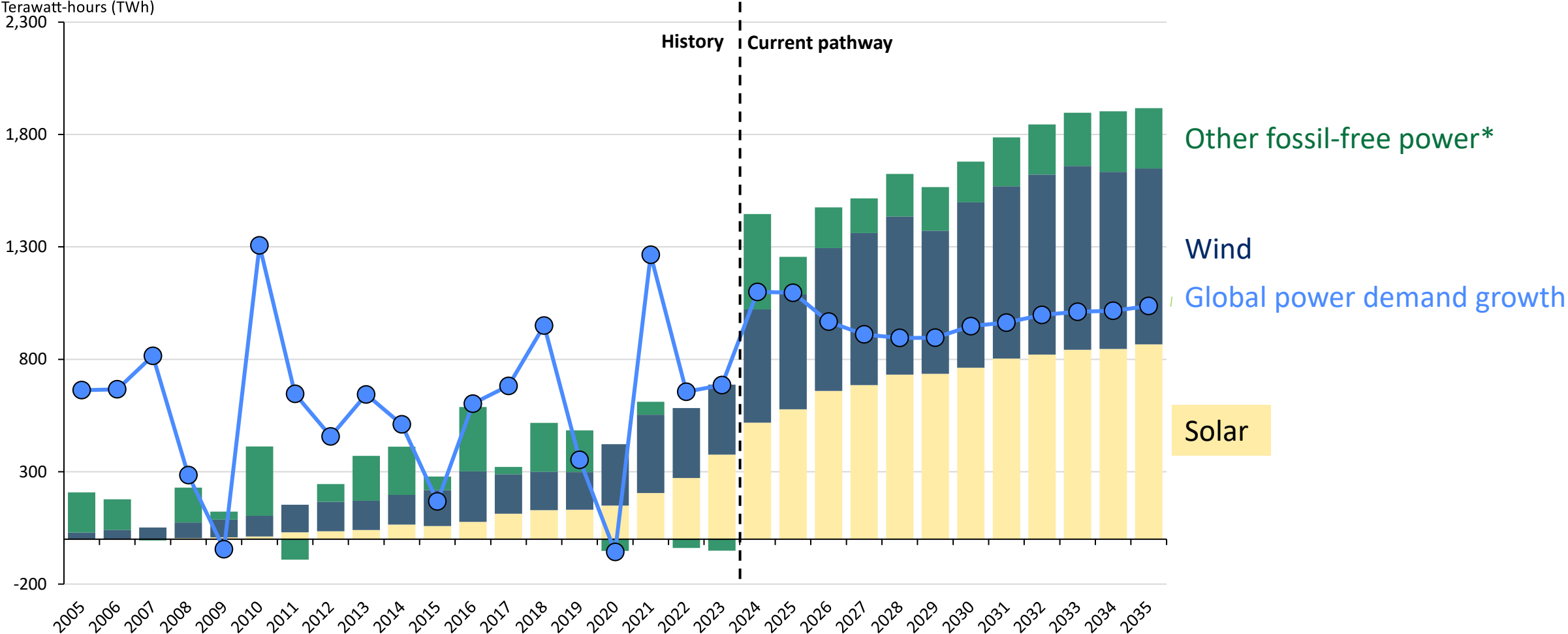
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Source: Rystad Energy research and analysis

Non-fossil power additions expected to outpace demand growth from 2024 onwards

Annual change in fossil-free electricity generation and global power demand

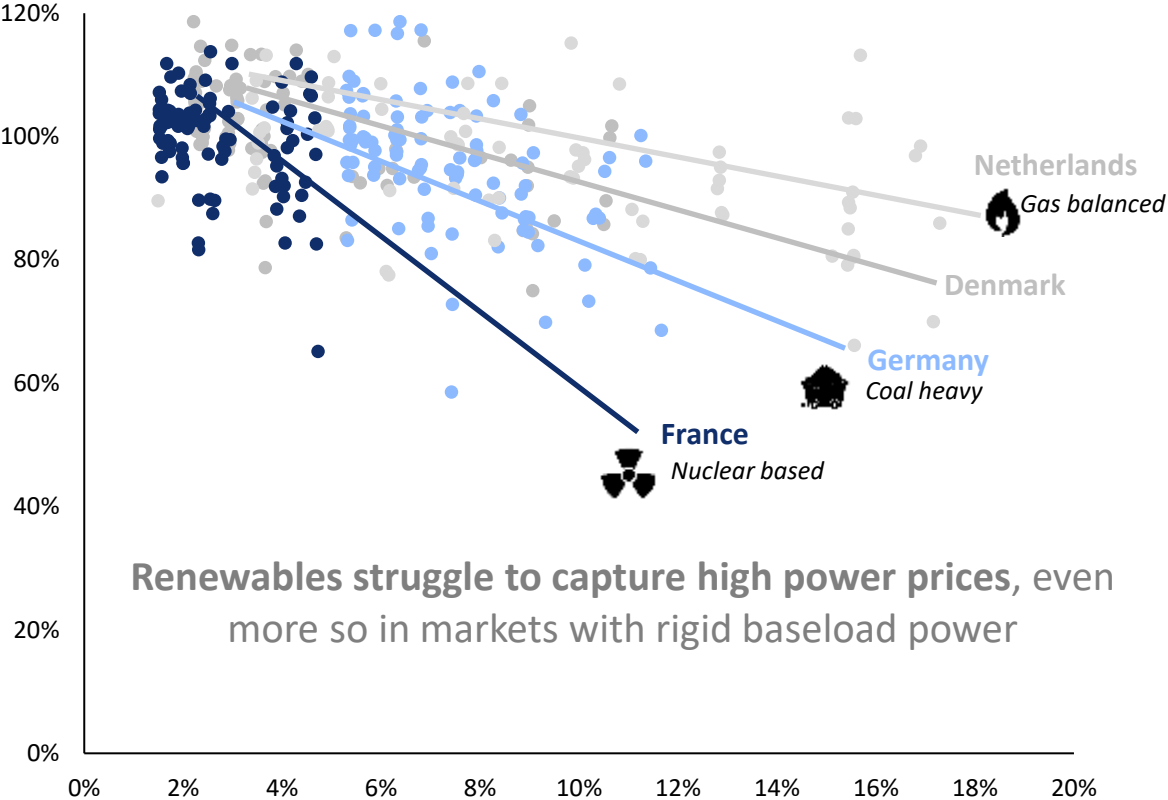


Source: Rystad Energy research and analysis; Rystad Energy PowerCube *Includes predominantly Hydro and Nuclear

But increasing variable renewable energy into power markets leads to greater price volatility and cannibalization effects that need to be managed

Capture factors vs. solar PV share of total generation

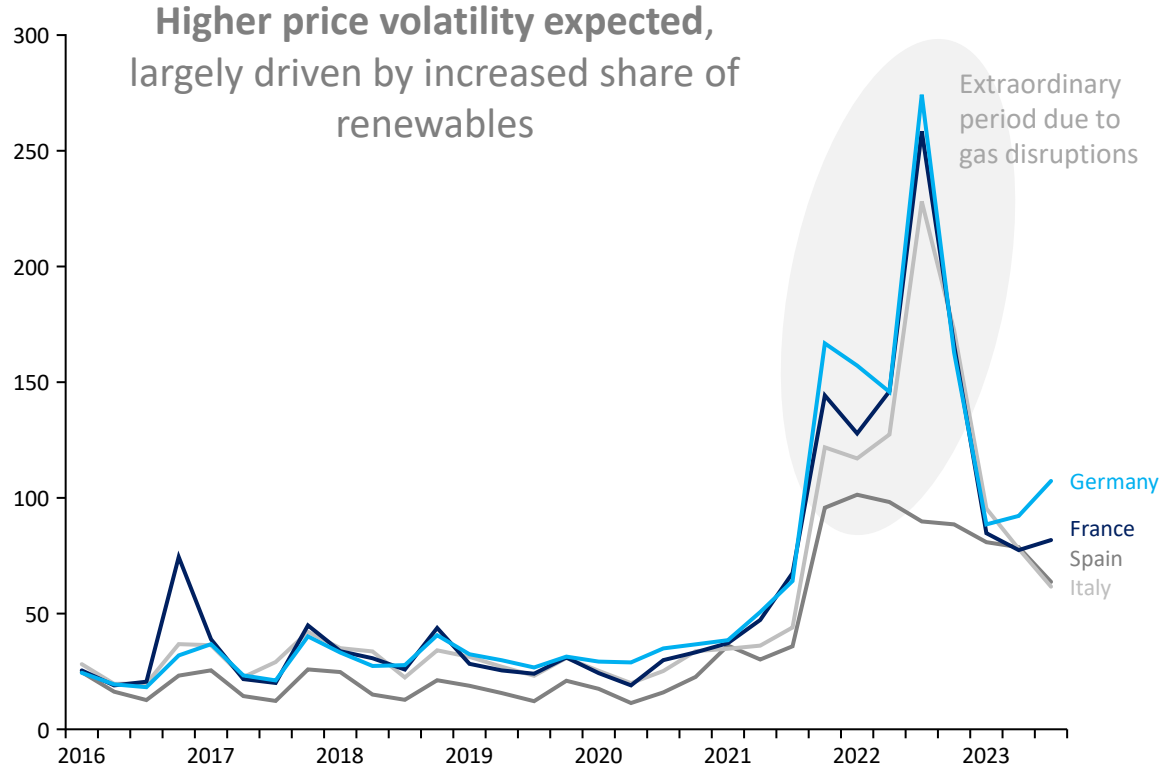
Percentage of reference price realized (y-axis); Percentage of total generation (x-axis)



Source: Rystad Energy research and analysis

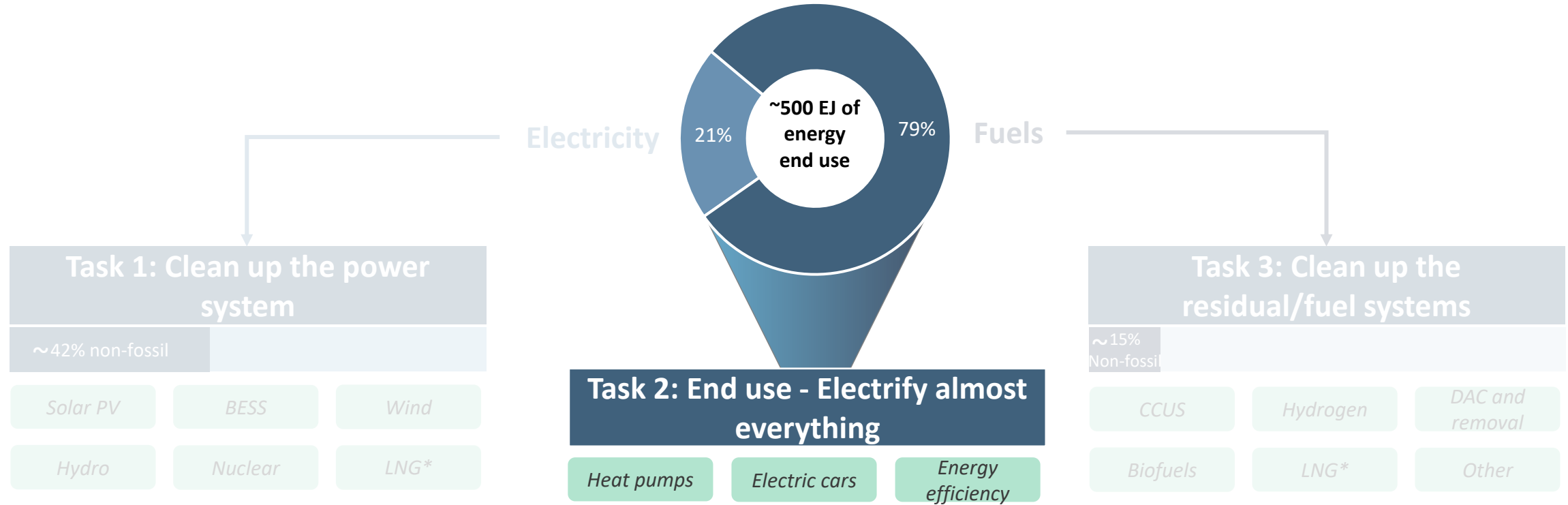
Volatility in power prices

Average 1-hour intraday spread by country (\$/MWh)



The road to a decarbonized energy market: End use – Electrify almost everything

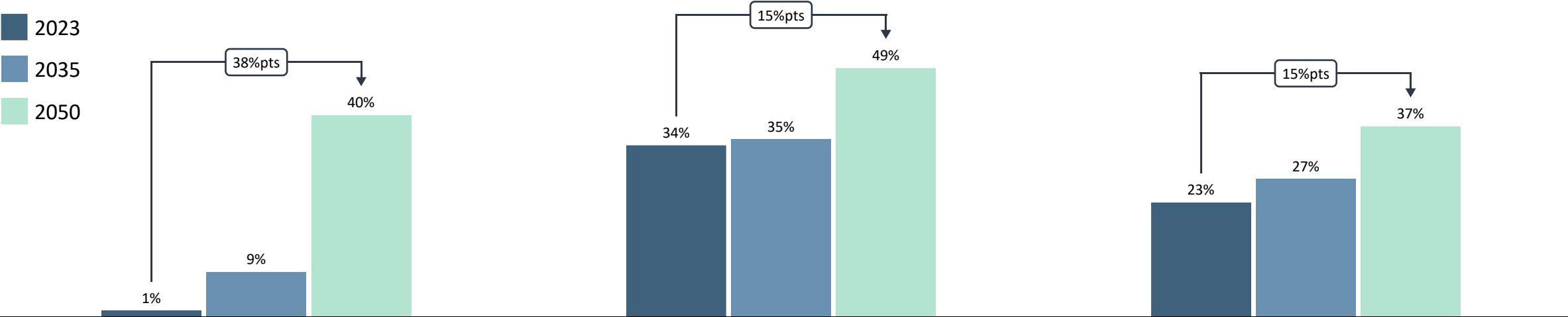
Three verticals to decarbonize the global energy system



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Source: Rystad Energy research and analysis

Electrification will not fit for all sectors, transportation to see the highest growth, while industry lags behind

Share of electricity in end use sectors
Percentage



Transportation

Main service:
Work

The **service of work** is suitable for short distances. Longer distances like shipping or aviation will rely on alternative fuels.

Buildings

Main service:
Space heat

Stickiness of buildings **heat systems** takes time to replace, yet electric alternatives are in the money.

Industry

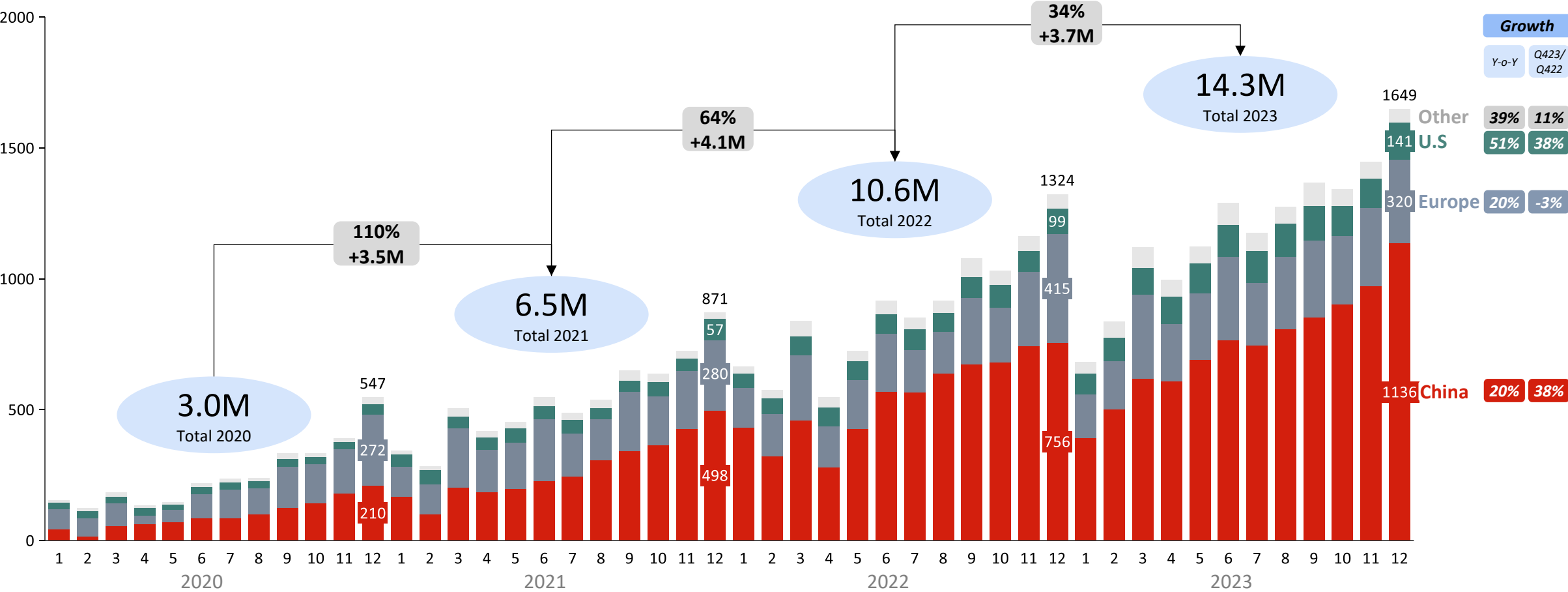
Main service:
Process heat

Demand for **high process heat**, will be hard to meet using electricity. Need for CCS and hydrogen alternatives.

1) Reported numbers from the 14 largest markets according to EHPA, accounting for ~90 of the European market.
Source: Rystad Energy research and analysis; European Heat Pump Association

Global EV sales grew 34% from 2022 to 2023, representing a slower rate than previous years

Monthly EV¹ sales per region 2020-2023
 Thousand passenger vehicles

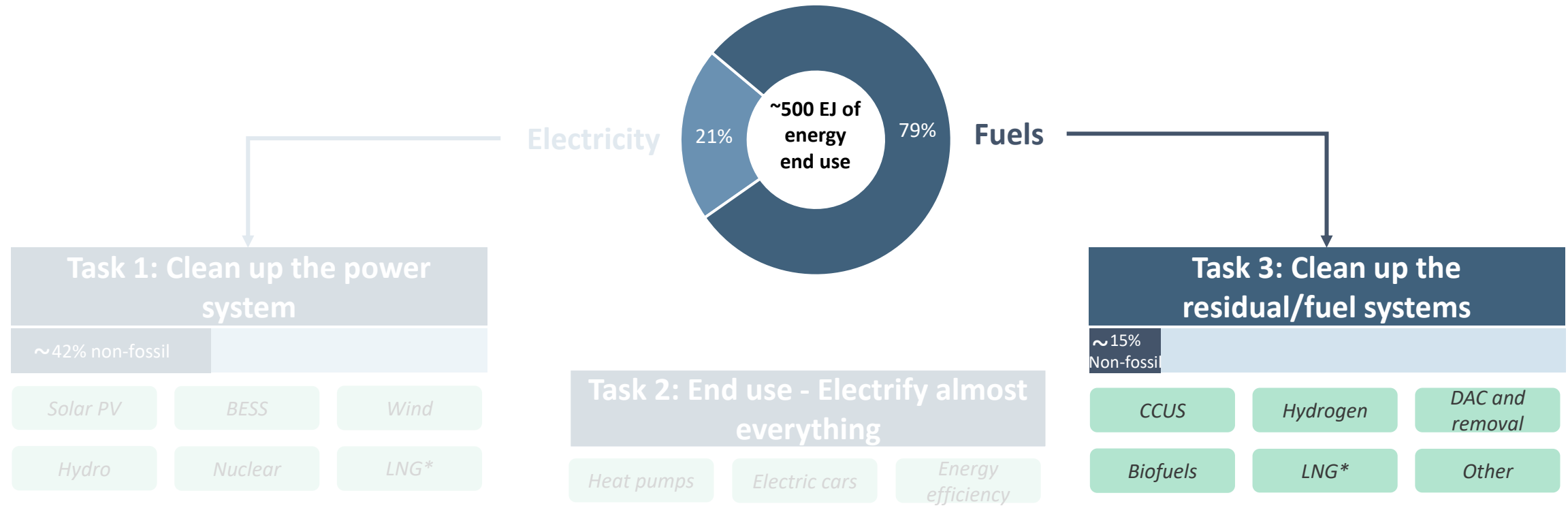


¹ EV includes BEV, PHEV and FCEV
 Source: Rystad Energy research and analysis; BatteryMarketsCube



The road to a decarbonized energy market: Clean up the residual/fuel system

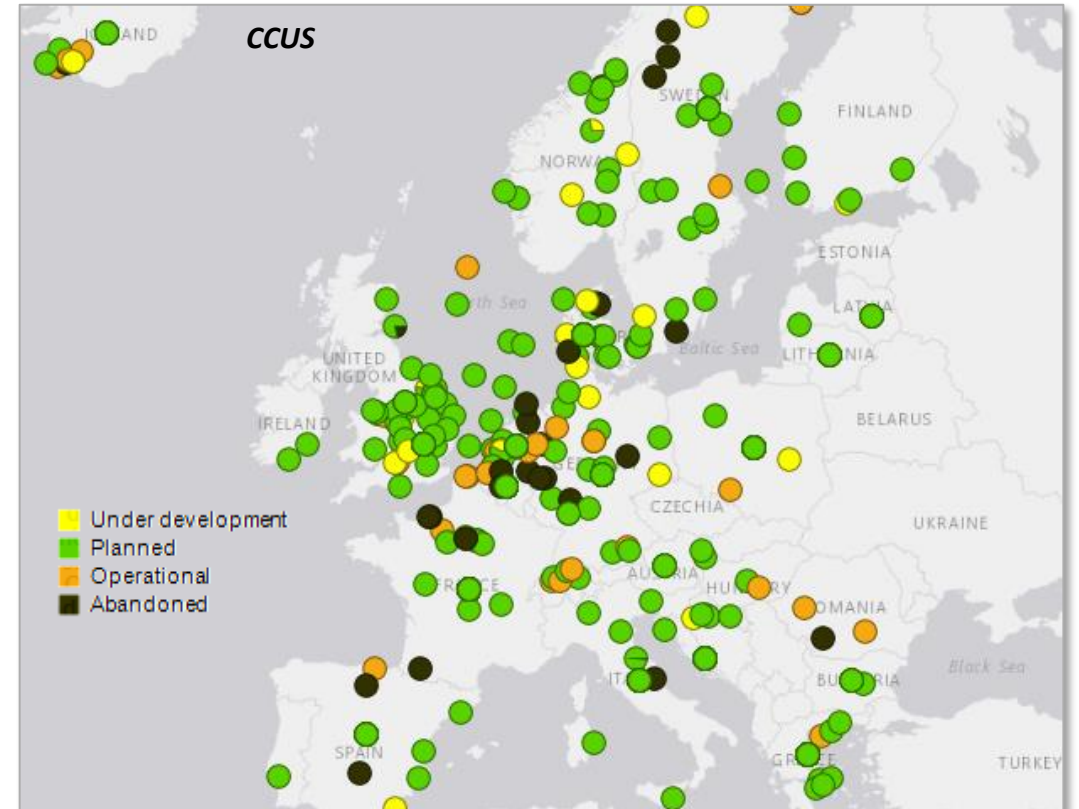
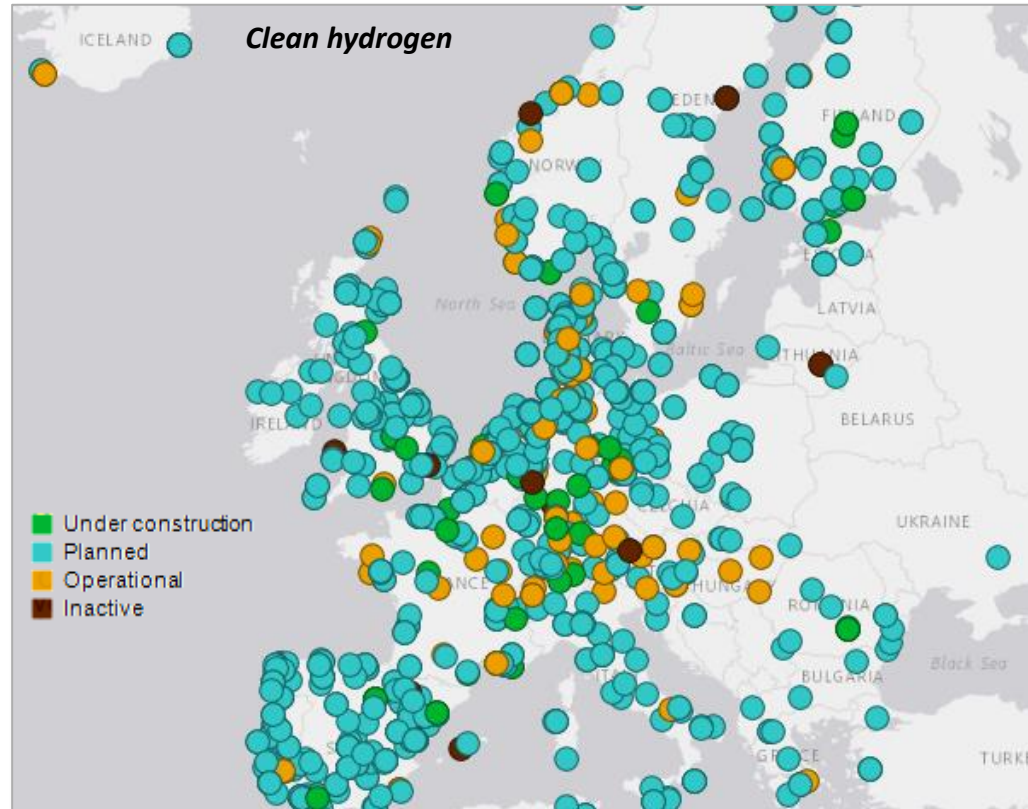
Three verticals to decarbonize the global energy system



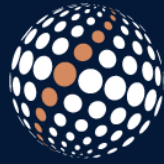
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Source: Rystad Energy research and analysis

Sufficient number of planned clean hydrogen and CCUS projects...

Operational and proposed clean hydrogen (left) and capture (right) projects by current life cycle



Source: Rystad Energy Hydrogen Solution; Rystad Energy CCUS Solution; Rystad Energy research and analysis



RystadEnergy

Navigating the future of **energy**

Rystad Energy is an independent energy consulting services and business intelligence data firm offering global databases, strategic advisory and research products for energy companies and suppliers, investors, investment banks, organizations, and governments.

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