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MONDAY MORNING QUARTERBACK
ENERGY MARKETS CEO BRIEFING NOTE

"The Electrification of Everything Demands we Move from Transition to Transformation!"

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The Electrification of Everything Demands we Move from Transition to Transformation!

For more than a decade, policymakers and investors have spoken of the "energy transition" as if it were a straight-line march away from fossil fuels and toward renewables. But the sheer scale and speed of the electrification of everything — from data centers and EVs to smart grids and industrial power — makes that narrative obsolete. Electricity demand is growing three to four times faster than hydrocarbons, forcing a wholesale reconfiguration of the global energy system. This is no longer a transition; it is a transformation. Oil and gas are not disappearing but being recast as the indispensable enablers of electrification. The risk now is not technological disruption but clinging to an outdated slogan — and missing the opportunities embedded in the new era of energy transformation.

Electrification Surges While Hydrocarbons Endure

Electricity demand is racing ahead. The International Energy Agency (IEA) projects it will rise 3.3% in 2025 and 3.7% in 2026, following 4.4% growth in 2024. By contrast, oil has historically grown at just 1.1% per year. This surge is structural, not cyclical, driven by electric vehicles, electrified heating, and above all the power-hungry explosion of AI and cloud computing.

China leads the charge. In May alone, its solar build-out added capacity on a scale that dwarfs annual installations in many advanced economies. India and the U.S. also contribute, though China's dominance in manufacturing, deployment and mineral supply chains keeps it ahead. Yet China is still heavily reliant on hydrocarbons. Coal use there is up year-on-year, while gas-to-power generation rose 9% in 2025, with LNG imports increasing to secure supply.

Europe tells a similar story. Despite ambitious green targets, European LNG imports jumped 30% year-to-date, making the continent one of the fastest-growing gas consumers. And for the first time since 2021, European gas demand actually increased, driven by low wind and hydro output. Industrial gas demand, however, remains 3% lower year-to-date, underscoring the drag of high prices on competitiveness.

Taiwan illustrates the political complexity. Despite 75% of voters supporting the reopening of a 1.9 GW nuclear facility, the referendum was voided. The result? LNG now supplies nearly half the island's power mix, locking in dependence on imports even as the economy plans a data center boom.

The outlook is unambiguous: electricity is becoming the dominant growth engine of the global economy. The prediction: data centers, AI, and electrification will double power consumption in key markets within a decade. The forecast: by 2035, more than half of all incremental energy demand could come from electricity. Yet this will not displace hydrocarbons. Instead, natural gas and oil will be recast as stability providers in the electrified economy.

Bottlenecks Slow Renewables, Strengthen Hydrocarbons

The biggest myth of the "transition" is that renewables alone can shoulder the load. In reality, the growth of solar and wind is colliding with structural bottlenecks.

Grids are the first constraint. In Europe, the average grid is 45–50 years old, and in North America, 35–40 years. These aging systems cannot absorb sudden surges of renewable power without reinforcement. This creates volatility: in July 2025, European spot prices swung from negative at midday (when solar flooded the system) to record highs by dinnertime. Without storage, fossil fuels remain the only shock absorbers.

Batteries are the second bottleneck. While once discussed mainly for EVs, batteries are now being deployed for grid balancing. Yet they remain constrained by minerals. Graphite, for instance, makes up 28% of a car battery and is now deemed a "critical mineral" by the U.S. and Europe. More than 65% of global graphite supply comes from China, which has already hinted at export restrictions. Lithium has gone through boom-and-bust cycles, cobalt surged then collapsed when the DRC increased output by 172%, and nickel is now being phased out of many battery chemistries.

Copper, however, is the true bottleneck. Demand is forecast to rise from 26.7 million tons today to 40.9 million tons within ten years. Yet average mine lead times are 18 years, and project approvals remain sluggish. Meeting this demand would require $250 billion of new investment today, or shortages will choke electrification before it reaches scale.

Meanwhile, Europe's gas storage sits at 73%, with an effective target of 77% ahead of winter. Norwegian field maintenance alone will reduce supply by 22 terawatt-hours per month, equivalent to dozens of LNG cargoes. Auctions in Germany added another 11 terawatt-hours of demand, tightening markets further. These swings highlight how vulnerable electrification remains to gas supply disruptions — and why hydrocarbons are still essential backstops.

The outlook: mineral and grid constraints will persist for at least another decade. The prediction: each time supply chains falter, hydrocarbons will step in as fallback fuels. The forecast: LNG and oil demand will remain structurally supported by the very bottlenecks slowing renewable integration.

Volatility and Geopolitics Redefine Energy Security

The third force reshaping the landscape is geopolitics. Russia's pipeline gas, once the cornerstone of Europe's energy mix, is unlikely to return under any credible scenario. Even if a political agreement were reached, Ukrainian opposition and the risk of sabotage make it untenable. The Nord Stream 2 pipeline has never operated, and German authorities show no sign of allowing it.

This locks Europe into LNG dependence for the long haul — a structural shift that reshapes global trade. Suppliers like Qatar, the U.S., and soon East Africa will compete to secure long-term contracts, while Asian buyers must navigate higher prices and tighter supply.

Oil markets, too, remain exposed. In 2025, refinery closures totaled 500,000 barrels per day, while Russian refinery outages of a similar scale tightened diesel supply. Combined, this kept refined products like diesel and jet fuel expensive, even as crude inventories built. That imbalance is why diesel prices spiked this past summer, creating knock-on pressure on gas demand in Europe when wind output was low.

Copper markets also illustrate the role of geopolitics. In mid-2025, U.S. tariffs of 50% on copper imports briefly sent domestic futures soaring, even as London Metal Exchange prices barely moved. Traders concluded the surge was political theater rather than structural shortage. Still, the episode underscored how easily policy decisions can distort mineral markets — and by extension, electrification costs.

The outlook: energy security will no longer be defined solely by oil barrels, but by LNG cargoes, copper tons, and graphite exports. The prediction: volatility in both fuels and minerals will intensify, fragmenting markets along geopolitical lines. The forecast: hydrocarbons remain the default security blanket in a multipolar system, offering resilience when renewables and supply chains falter.

Conclusion: Transformation Is the Opportunity

The old "transition" story — a world where fossil fuels steadily decline while renewables rise — no longer fits the facts. What we are seeing is a transformation: a messy, uneven, but unstoppable reconfiguration of the energy system. Electrification is racing ahead, with demand growing three to four times faster than hydrocarbons. Yet hydrocarbons are not being displaced; they are being recast as the foundation beneath renewables.

Natural gas and LNG are essential for balancing intermittency. Oil remains critical in transport and refined products. Minerals like copper, lithium, and graphite will one day shape the electrification pathway, but their bottlenecks ensure hydrocarbons will remain indispensable for decades.

For companies, investors, and policymakers, the choice is stark: remain prisoners of the outdated "transition" slogan and risk irrelevance, or embrace the reality of transformation and seize the opportunities in the electrification of everything.

The winners will be those who build across the full energy spectrum — investing in LNG terminals as much as solar farms, in copper mines as much as data centers, in power grids as much as wind turbines. The losers will be those who hesitate, waiting for a linear transition that never arrives.

This is not transition. This is transformation. And the transformation has only just begun. ■

TOP 10 What's at Stake in the Move from Transition to Transformation:

1. **Electricity Outpaces Hydrocarbons** – Global electricity demand is growing 3–4x faster than oil, reshaping energy balances.
2. **Hydrocarbons as Enablers** – Gas and oil are not disappearing but anchoring electrification as stability providers.
3. **China's Dual Role** – Leading in solar build-outs while still heavily dependent on coal and LNG.
4. **Europe's LNG Lock-In** – Imports surged 30% in 2025, cementing long-term reliance on gas.
5. **Nuclear's Political Fragility** – Taiwan's failed 1.9 GW restart underscores LNG as the fallback.
6. **Grid Bottlenecks** – Europe's 45–50-year-old networks can't absorb renewables without fossil backup.
7. **Critical Minerals Squeeze** – Copper demand to rise 50% by 2035, graphite 65% dependent on China.
8. **Refined Products Still Tight** – Diesel shortages from refinery closures and Russian outages keep oil demand firm.
9. **Geopolitical Fragmentation** – Energy security now defined by LNG cargoes, copper tons, and trade wars.
10. **Winners vs. Losers** – Those who embrace transformation and invest across the spectrum (LNG, solar, copper, grids) will thrive; those waiting for a linear "transition" risk irrelevance.

NB Source material for article from Analyst interviews and intelligence from Svelland Capital, Rystad Energy, the IEA and Bloomberg amongst others.


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