



Brainstorming 2024

Themes for discussion

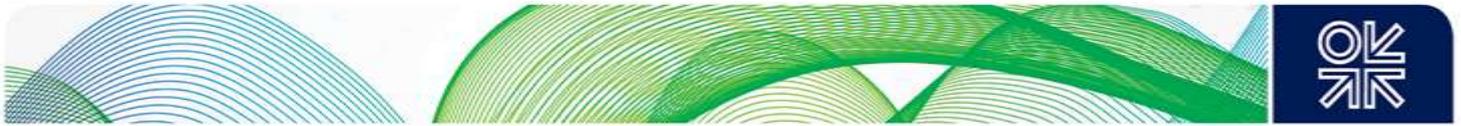
The format of the 2024 OIES Brainstorming has been designed to enable in-depth discussions of both short-term and long-term energy issues that will strongly affect the entire energy sector, notably those related to geopolitics, economics, climate change and decarbonization.

The geopolitical landscape has become more complex impacting the operation of energy markets and shaping energy policies, industrial policies, decarbonization pathways and climate diplomacy. In turn, the shifts in energy markets and decarbonization are transforming the geopolitical landscape and local politics. The longer-term policy objective of decarbonization requires extensive changes to the energy system including electrification of many energy end-markets, deep penetration of renewables, scaling up low carbon technologies and building resilient supply chains. The implication is the need for a transformation both on the consumption and the production side of the energy system. However, there is also a growing awareness of the difficulties of rapidly transforming the energy system into a reliable, secure, and affordable one and thus the need to maintain investment in fossil fuels while accelerating investment in electrification, renewables, and scaling up decarbonization technologies. The focus of the 2024 OIES Brainstorming will be on the barriers and enablers for a rapid transformation in the energy mix consistent with net zero targets and the implications for governments and players' strategies if climate targets are not met.

There are 8 themes which will be discussed in order, but the timing will be flexible; some might only take 45 minutes, while others might stretch over two sessions (see timetable attached).

Theme 1: How are the geopolitical, energy security and energy transition interacting to shape the energy scene and energy policies?

- What are current key geopolitical hotspots and how are the shifts in the geopolitical scene and election politics shaping energy policies, industrial policies, and climate action?
- How is the energy transition agenda interacting with domestic/international politics?
- How relevant does the energy trilemma remain in shaping energy players' behaviours and energy policies?
- Is energy security still the dominant driver of policy? What about the role of affordability?
- Are concerns about oil and gas security no longer relevant?
- What are the benefits and costs associated with the rise of green industrial policy?
- Will green industrial policies accelerate or slow the deployment of low carbon technologies?



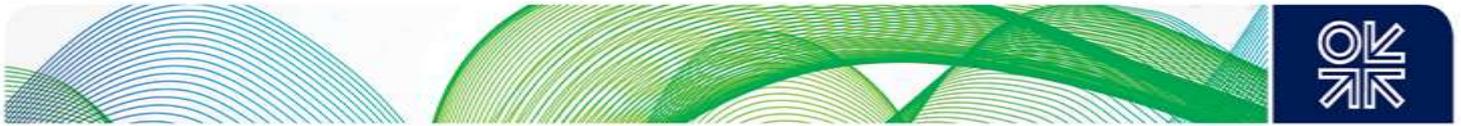
- How are industrial policies impacting the supply chains of clean energy technologies?
- Will such policies stifle innovation and knowledge and technology transfer?
- How will these policies impact climate diplomacy and collaboration between countries, particularly between the Global South and Global North?
- Will we see a wide proliferation of climate clubs and a decline in the importance of global approaches to climate change?
- Will policies such as CBAM increase trade tensions between nations acting as an additional barrier? Will CBAM have the effect of spreading carbon pricing and harmonizing standards?

Theme 2: How is the shifting geopolitical landscape and transition impacting developments in oil, gas, and electricity markets?

- How are the current geopolitical shifts impacting the operation of energy markets?
- **In oil markets**, what have been the main shifts in producer-producer relations (Russia, Gulf, and the US) and producer-consumer relations (Gulf-China-India)?
- Will OPEC+ continue to balance the market? Could we see a shift in big producers' strategy if oil demand growth slows down?
- How serious is the oil underinvestment problem?
- Will China as the main engine for oil demand growth fade within this decade? How is the EV rollout in China impacting its oil demand outlook?
- What are the medium- and long-term implications for oil markets of shifts in policies and relations?
- **In gas markets**, how important is Russia's pipeline gas and LNG for global and European gas markets?
- What role will gas play in China's transition? How will the Chinese coal phase-out affect gas demand?
- What are the drivers and constraints to LNG build-out post 2030? What will be the demand drivers – intermittency cover or electrification?
- Regulation/policy versus price: what are the key drivers for demand in the remainder of the decade?
- **In electricity markets**, how are geopolitical shifts influencing global supply chains for renewable energy technologies, particularly for critical components like solar panels and wind turbines?
- What are the short-term and long-term impacts of reliance on LNG for importing natural gas on the European electricity generation mix?
- Can countries realistically leverage renewable energy resources to reduce geopolitical vulnerabilities linked to natural gas dependence?

Theme 3: Will electrification and renewables meet their potential?

- How can market structures and financial incentives be aligned to support the transition to a net-zero fully electrified system?
- How can we effectively manage the intermittency and reliability issues associated with large-scale integration of renewable energy sources?
- What are the necessary steps and investments required to upgrade existing electricity grids for compatibility with renewable energy sources?



- How can we ensure that the transition to electrification is equitable and does not disproportionately affect low-income or marginalized communities?
- Can China help triple renewables domestically/globally? How will geopolitics impact sales of new energy products/components and what are the implications for the energy transition?

Theme 4: What is needed to scale up technologies in the hard to abate sector?

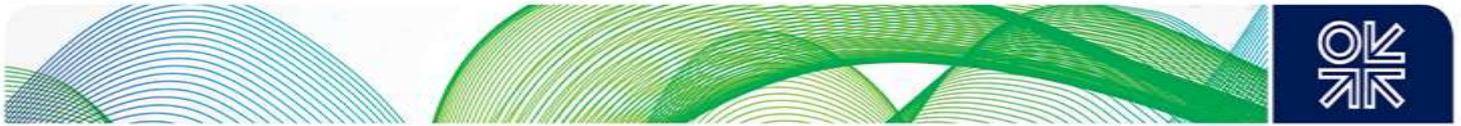
- What are the key challenges in developing viable business models for decarbonizing the hard-to-abate sector?
- Are regulatory frameworks and support mechanisms developing fast enough to enable business models in the hard-to-abate sector?
- Are carbon pricing mechanisms sufficient to incentivise decarbonization in the industrial sectors such as steel and cement?
- In terms of specific technologies, is CCUS activity finally picking up? In which countries and in which sectors (cement, steel)? Are we seeing the emergence of new CCUS business models?
- What about hydrogen? Has the hype around hydrogen receded? Is the role for hydrogen in the transport sector or has electrification won the race?

Theme 5: What is role of consumers in the transition?

- What roles can consumers play in the transition? Why are they important?
- What are the primary mechanisms through which consumer behaviour affects the speed and success of the transition?
- Which sectors are most significant in terms of the impact of consumer behaviour on the transition?
- What shapes the consumption behaviour of end users in response to the transition and climate change concerns, and how sustainable are these changes?
- What are the primary factors affecting consumers' decisions regarding adopting low carbon technologies and solutions, such as solar panels or EVs, energy efficiency etc.?
- How effective are government incentives and regulations in changing consumer behaviour towards more sustainable energy choices?
- How do consumers perceive and respond to the risks and uncertainties associated with new energy technologies?
- What is the role of local community energy initiatives in shaping individual consumer behaviours towards the transition?

Theme 6: Is finance a barrier to the transition?

- How are changes in the policy and regulatory landscape affecting financing decisions? Is this encouraging arbitrage between jurisdictions?
- How quickly are financial institutions adjusting their loan portfolios towards renewables? Is this impacting their risk-adjusted returns?
- How do financial institutions account for their carbon exposure in their loan portfolios? Has their carbon exposure been reduced?
- Have ESG considerations reduced in importance in making financing decisions?



- How are financial investors adapting to rising interest rates and bottlenecks in the supply chain in renewables?
- What is needed to ramp up the flow of finance into renewables in developing countries? Is the COP decision to transition away from fossil fuels helping in that regard?
- Are multilateral development banks rising to the challenge?
- Are carbon markets playing a central role in financing transition technologies?

Theme 7: What role will hydrocarbons and coal play in the transition?

- Does the COP conclusion of transitioning away from fossil fuels induce a more accelerated decline in the share of oil, gas and coal in the energy mix?
- Do broad policy signals influence (e.g. COP transition away from fossil fuels) demand for hydrocarbons and do they have any influence on consumption patterns absent fiscal incentives to transition?
- If hydrocarbons demand does not fall sharply, what will the implications be in terms of government and companies' responses?
- Will we see new areas of competition emerging, for instance in terms of reducing carbon intensity? How will this look like?
- Until progress is made on power storage (batteries, ammonia, pumped), gas is the obvious cover for renewables intermittency. Greater electrification will only increase that need. Is gas supply ready to rise to that challenge?

Theme 8: How should companies adjust their portfolios and strategies in a world where climate targets are not met?

- If climate targets are not met, what challenges and opportunities does this present for companies?
- What is the optimal balance between traditional energy sources and renewable energies in companies' portfolios to mitigate risks associated with market and policy fluctuations, including that of missing the net zero target?
- How can companies introduce flexibility in their business models and strategic planning to account for various outcomes like, policy shifts, market shifts and public opinion changes?
- How can companies adapt to a heterogeneous regulatory environment where climate policies may vary significantly across regions and over time?
- Will there be a point where the economic value of adaptation exceeds that of mitigation? What will the implications be?
- Will carbon removals increase in importance? How active are companies in carbon removals? Do energy companies have a competitive advantage in removal technologies?
- Does carbon offsetting still constitute a key pillar in companies' decarbonization strategies?
- What strategies must companies adopt to maintain, or improve, their corporate reputation in the context of environmental responsibility, even if national climate targets are not realised?