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■ INDEPTH FEATURE Reprint October 2022

ENERGY SECTOR

Financier Worldwide canvasses the opinions of leading professionals around the world on the latest trends in the energy sector.





Respondents



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Jeremy Wheatland is a senior partner in L.E.K.'s London office and serves as global co-head of the firm's industrials sector. He has extensive experience in providing strategy advice, transaction support and performance improvement in a broad cross-section of industries. Mr Wheatland has worked with many clients in the energy industry across the value chain, from oil & gas production to electricity supply. He received a BSc in chemical engineering from the University of Birmingham and an MBA from INSEAD. Prior to L.E.K., he worked for Total E&P and BOC Gases. Mr Wheatland is a chartered engineer and a Sainsbury's management fellow.



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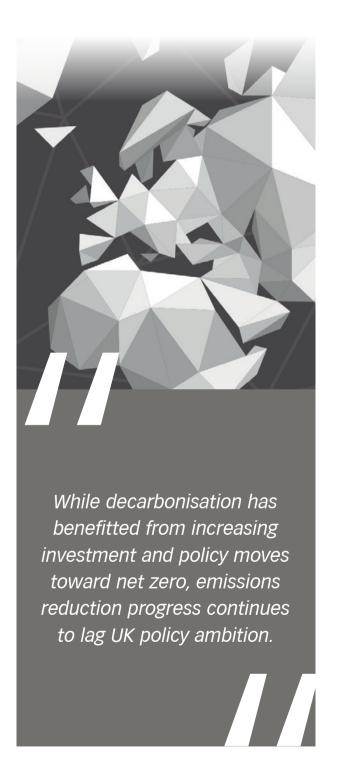
Luke Samuel is an engagement manager in L.E.K.'s industrials practice. He has worked for both L.E.K.'s London and Houston office, and has broad experience advising energy clients on strategy and transaction work across renewables, oil & gas, nuclear, and other key energy transition technologies and services. Mr Samuel has a degree in geography from Oxford University, as well as a masters in management from IE Business School in Madrid.

Q. Could you outline the major trends in the UK energy sector over the last three years?

A. The UK energy sector faces three key challenges that it continuously tries to balance: security of supply, affordability and decarbonisation. Over the last three vears, each of these elements has been in the spotlight. UK supply security has weakened with North Sea oil & gas production in long-run decline, combined with reduced exports from Russia creating shortages in the gas market. At the same time, electricity generation has been stretched by the aging nuclear fleet, and capacity constraints in the electricity distribution network are occurring. Affordability issues were masked by reduced pandemic demand, but recoveries in activity combined with the current gas supply issues have created sharp price increases in both electricity and gas. While decarbonisation has benefitted from increasing investment and policy moves toward net zero, emissions reduction progress continues to lag UK policy ambition.

Q. In the short term, what can the UK do to address its energy security challenge?

A. Even though it may require long-term investments to make major changes to the energy system, there are still short-term actions that could alleviate some pressure on security issues. On the demand side, current energy prices will incentivise investment in energy efficiency measures, ranging from simple insulation to complex smart building technologies. The challenge is to catalyse action by end consumers and asset owners. Additionally, the government may choose to intervene directly, particularly for low-income households. Changing consumption behaviour will be difficult to deliver, especially in winter. However, using flexible pricing mechanisms may help balance out consumption patterns to some extent. On the supply side, while there is no immediate silver bullet, rapid action now will underpin the UK's mid- and long-term energy security. Accelerating approvals for new renewable and nuclear generation capacity are essential to ultimately reduce our dependency on imported gas, although this will take time to deliver. Similarly, North Sea approvals, as well as potential



fracking activity, may support greater domestic gas production as mid-term solutions.

Q. In the long term, how can the UK meet its net-zero commitment?

A. While the UK has achieved around 30-40 percent emissions reductions, relative to 2010, progress will need to be accelerated to meet the net-zero target in 2050, with higher levels of investment than seen to date. Fully decarbonising the grid will require investment in transmission infrastructure, in renewables and in nuclear generation, including small modular reactors (SMRs). In parallel, a network solution to intermittency will be required as the proportion of wind generation increases. Widespread electrification will require profound changes to housing stock, such as greater energy efficiency, heat pumps and so on, transport, such as electric vehicles (EVs) and charging infrastructure, and to industrial infrastructure. In addition. the electricity grid will require significant investment to handle higher loads and manage significantly greater peak demand, estimated at 1.5-2 times the current rate



by 2050. Given the power requirements and the limitations of existing technologies, eliminating liquid and gas fuel is unlikely in the foreseeable future. As a result, development and adoption of alternative power-to-X solutions, such as hydrogen, will be a crucial element of the energy mix.

Q. How are energy companies responding to long- and short-term challenges?

A. UK energy players are responding with short-term actions to address the current crisis while continuing to invest and reposition their businesses to participate in the energy transition. Specific action will vary depending on the position in the value chain. For example North Sea oil & gas producers are seeking to maximise shortterm production from existing fields and accelerate development of new prospects, such as Jackdaw. In the long term, companies may seek to participate in nonfossil fuel opportunities, including syngas, hydrogen, and carbon capture, utilisation and storage (CCUS) while repositioning their organisations toward other low carbon technologies. Power generators will continue to target commercial and

operational reskilling to manage the transition to low carbon generation, but will also need to look for partners to adopt next generation technologies such as CCUS. Service and equipment providers are typically evaluating both organic and inorganic approaches to develop capabilities and products relevant for near-term energy transition priorities, including grid refurbishment and upgrades, as well as developing ways to participate in emerging areas, such as hydrogen.

Q. How are energy companies responding to growing pressure to address environmental, social and governance (ESG) issues across their operations?

A. UK companies across the economy are facing increasing pressure to address ESG issues from investors, customers, supply chain partners and employees. For energy companies, these issues are critical to the sustainability of their core business model, both in the near- and long-term. Energy players across the UK have set targets and initial strategies, with 80 percent of energy respondents to our recent sustainability survey highlighting that they have 'very clear' or 'somewhat

clear' ESG strategies. However, the translation of these strategies into a coherent ESG programme that aligns with broader commercial opportunities and can be actioned by the business remains challenging to deliver. Making verifiable progress on ESG goals is fundamental to energy companies' long-term sustainability and relevance. Typically, energy companies that are successfully addressing these existential ESG challenges are those that have embedded the issues at the heart of their core commercial strategy.

Q. What are the next steps for energy system players to thrive in a changing UK energy environment?

A. The past year has been a shock for the energy markets and the short-term outlook remains uncertain. However, successful players will need to continue to construct robust and agile strategies to navigate short-term uncertainty while not losing sight of the longer-term energy transition threats and opportunities. Firstly, players should review their capabilities and look for ways to provide solutions for the current set of energy challenges.

Additionally, energy companies should

seek to diversify and reduce their exposure to fossil fuels by deploying heritage technology or capabilities into alternative segments, such as switching engineering services from oil & gas into offshore wind or ports. Secondly, energy players should identify long-term transition opportunities and look to create participation strategies for each while acknowledging the uncertainly around future industry development pathways. Companies should identify attractive areas to play and, within these, assess where they should be a leader or a fast follower.



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