The New Energy Paradox

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Around 80% of global oil and gas production is concentrated in fewer than 15 producing countries - the United States, Saudi Arabia, Russia, Canada, China, Iraq, UAE, and others (IEA - 2025). This dependency has been at the core of long-term global energy politics.

However, as the world transitions toward cleaner, and greener energy systems, it is running into a new structural dependency. With investment shifting from hydrocarbons to renewables, market power will be concentrated in even fewer hands. While these 15 countries dominate fossil fuel production, fewer than five countries currently lead clean tech manufacturing and critical-material processing, exposing the world to new risks and uncertainties.

At the centre of this group sits China. The country is the undisputed leader in global processing of rare earth elements, controlling roughly 90% of processing capacity. China also accounts for more than 80% of global solar panel manufacturing capacity, close to 70% of lithium-ion battery production, circa 60% of global electric vehicle manufacturing, and is the global powerhouse for wind turbine, electrolyser, and heat pump manufacturing.

China's sustained investment and long-term planning have played a leading role in its emergence as a global leader in renewable energy. It has successfully aligned industrial policy, technology development, and large-scale, low-cost manufacturing decades ahead of its competitors.

National security, energy security, and job security are now inseparable. Understandably, politicians and decision-makers want to reduce the reliance on oil and gas from politically sensitive or unstable regimes. However, replacing one dependency with another is unlikely to be a winning outcome.

Over the next few decades, the UK will need to install thousands of new wind turbines, renew its electricity grid, kick-start a hydrogen sector, renew the nuclear industry, create a new carbon capture and storage base, establish a storage business, and deliver net zero by 2050. The challenge is enormous, but so is the opportunity.

To capture that opportunity, the UK must strengthen its domestic supply chains, its industrial capabilities, and its workforce. The UK's Offshore Wind Sector Deal target of 60% UK content remains the right ambition, but ambition alone will not deliver factories, vessels, ports, or skilled people.

The current level of UK content in renewables is typically around 25% for capital activities and up to 85% for operating activities. For the UK to realise 60% local content, it will need to increase its manufacturing, installation, and commissioning capabilities. By capitalising on these changes, the UK can enhance its sovereign supply chain capacity and increase UK capital content for new offshore projects. A significant element of this new capacity needs to be developed now, ahead of final investment decisions.

Recent announcements by GB Energy, Development Agencies, the Crown Estate, and others to support a UK-based supply chain are welcome steps in the right direction. These will help to catalyse investment in ports, fabrication yards, and manufacturing facilities. However, if the UK really wants to compete on a global scale, we will need to go further and faster. The UK has the resources, expertise, and industrial heritage. What it needs now is the resolve and confidence to turn these opportunities into world-leading UK supply chain capabilities and jobs.