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POLICY BRIEFING FOR PARLIAMENTARY EVIDENCE WEEK 2025

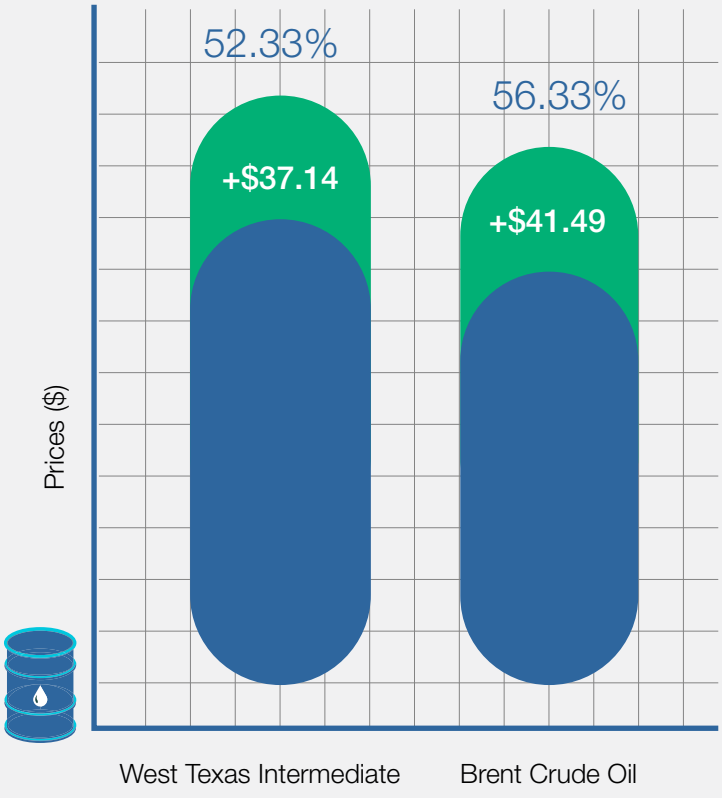
Can Energy Transition co-exist with Energy Security?

Strategies for the United Kingdom to Ensure Energy Security and Facilitate the Energy Transition

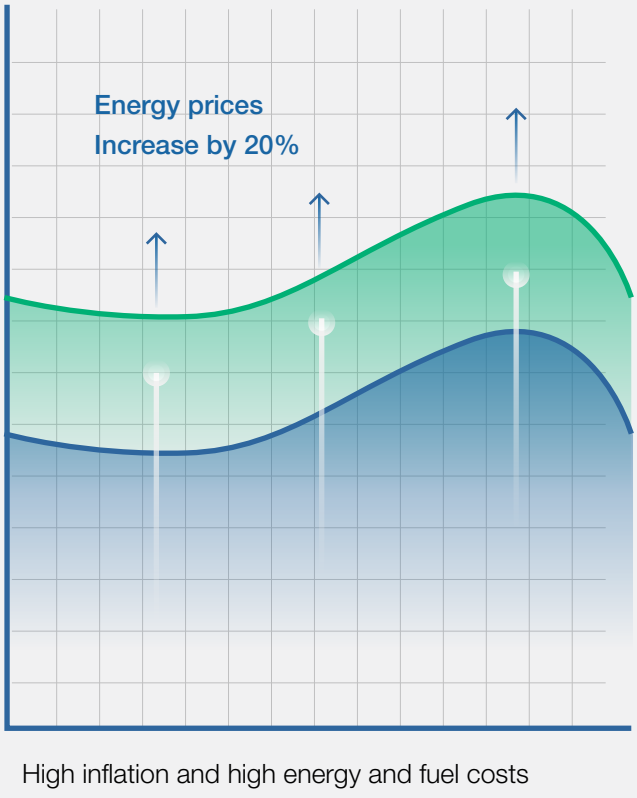
Executive Summary

Dr Victor Azubike

Energy is the bedrock of modern society; it cuts across all sectors and contributes to the development of economies around the world. Balancing immediate energy security with long-term net-zero goals presents a critical challenge for the UK. The Russia-Ukraine conflict and other developing conflicts disrupt energy markets, resulting in governments prioritising energy security concerns over climate commitments. The conflict and its chain of events caused the West Texas Intermediate (WTI) crude oil prices to increase by $37.14 per barrel, a 52.33% surge, and the Brent crude oil price to rise by $41.49 per barrel, a 56.33% increase. The conflict amplified oil price volatility and altered the trend of crude oil prices. High inflation and high energy and fuel costs have also disrupted businesses as energy prices increased by 20% worldwide. Balancing short-term energy needs with long-term decarbonisation goals presents a challenge for the UK. This requires a dual strategy of immediate action on energy security alongside accelerated investment in renewables, demanding policy consistency to attract necessary private investment. Recommendations focus on creating comprehensive strategies that acknowledge the complementary but ultimately conflicting roles of fossil fuels and renewables, ensuring accountability for emissions from new fossil fuel developments while establishing clear phase-down pathways.



The Russia-Ukraine conflict effect on the oil market



High inflation and high energy and fuel costs

Understanding Energy Security and Energy Transition

Energy is at the heart of economic development in every modern country of the world. The need to find and utilise energy sources to meet people's requirements has been a factor from the start of civilisation, and fossil fuels have been a big part of the development of civilisation. Conceptualising energy security from a legal perspective promotes the uninterruptedness of energy supply proportionate to demand. According to the International Energy Agency (IEA), energy security is the uninterrupted availability of energy sources at an affordable price. Therefore, with energy security, the time-related preferences made by the government and the manner it balances national security, economic and environmental issues are based on the perspective of the government.

Climate change action and the reduction of greenhouse gases to mitigate global warming have made it vital for the UK government to appraise its energy transition and net-zero policies in line with the Paris Agreement. The energy transition is a vital step that needs to be taken to achieve a reduction of greenhouse gases and mitigate the effects of climate change. Although most of the plans are marred with uncertainties, the energy transition has been widely accepted, and the idea is to limit temperature rises to less than 1.5°C above pre-industrial levels. Unlike the previous energy transitions that were based on inter-fuel competition, with coal, oil, or gas emerging as efficient energy sources that drove the economic growth and industrial development of many Western countries, this energy transition will be driven by government regulations and policies. To avert or mitigate the adverse effects of global climate change, governments, as well as their policies and regulations, must drive this net-zero transition. Joint, regional and national efforts can yield significant global results. Accelerating the energy transition will require strengthening the role of policies and, inevitably, the lack of key policies could derail the net-zero transition targets.

> **Energy security is the uninterrupted availability of energy sources at an affordable price**

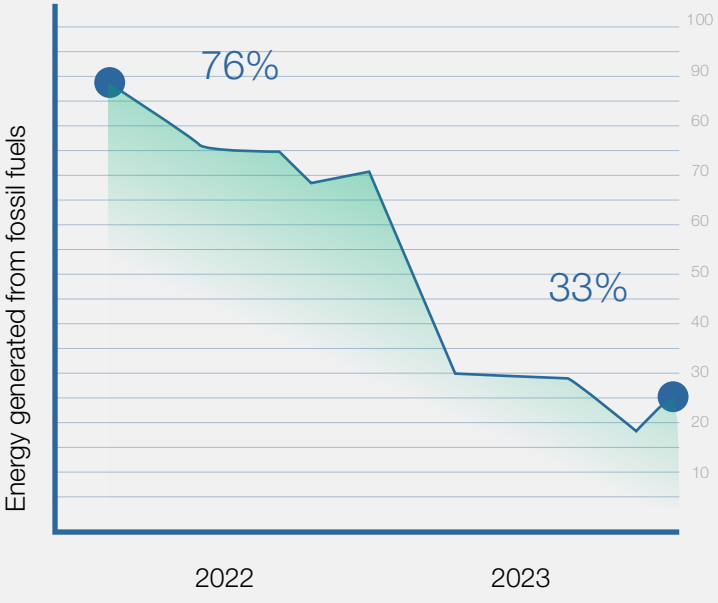
"Unlike the previous energy transitions that were based on inter-fuel competition, with coal, oil, or gas emerging as efficient energy sources that drove the economic growth and industrial development of many Western countries, this energy transition will be driven by government regulations and policies."

Policy Context

Policy developments give rise to a spectrum of potential progressions. Focusing particularly on energy security, the energy transition, and major industrial collaboration. Key frameworks govern the UK's climate and energy approach, including the Climate Change Act 2008 (mandating 100% emissions reduction from 1990 levels by 2050), the Paris Agreement (limiting warming to 1.5°C). To help meet these targets, the UK government has set a target to decarbonise the electricity system by 2035. The British Energy Security Strategy outlines the transition to clean energy, while the Sixth Carbon Budget commits to 78% emissions cut by 2035.

In 2022, about 76% of UK energy was generated from fossil fuels, with renewable sources growing but remained insufficient for total demand. Since then, fossil fuels' share has dropped to a record-low 33% in 2023, being overtaken by renewables in the process. Achievement of established targets necessitates a policy-driven transition that includes increased investment in renewable energy. Realising the nation's energy resilience objectives requires a governmental entity focused on fostering innovative technologies to support these goals.

Considering the global energy sector's transformation, the UK's external energy policy emphasises renewable



energy development, energy resilience and diminished fossil fuel dependency. Therefore, international partnerships like the UK-EU Deal: Energy cooperation, have become apparent in the energy security goals, whether it's partnerships to secure critical raw minerals necessary for the clean energy technology development. The EU Critical Raw Minerals Act evidences this. An accountability framework may give significant aid in advancing energy security and transition plans. To bolster the Ten-Point Plan for a green revolution, while the UK government persists in providing substantial financial frameworks such as the Clean Growth Fund (CGF) and the Energy Entrepreneurs Fund (EEF), requires stakeholders to enhance coordination, technical assistance, and public-private partnerships to facilitate more substantial climate finance flows.

Climate Change Act 2008 (mandating 100% emissions reduction from 1990 levels by 2050), the Paris Agreement (limiting warming to 1.5°C).

Research Aims

1. Examine the relationship between energy security and energy transition in the UK context.
2. Analyse the tensions between the UK government's short-term energy security measures and long-term net-zero commitments.
3. Identify pragmatic pathways that allow for both immediate energy security and continued progress toward decarbonisation.
4. Propose a balanced approach that acknowledges the continuing role of hydrocarbons while establishing clear pathways to phase down.

"United Kingdom's aging energy infrastructure requires substantial modernisation to accommodate the fluctuating nature of renewable energy sources."

Research Findings

Evidence-based policymaking has shaped the UK government's policymaking. Therefore, this research employed doctrinal and socio-legal methodologies to analyse, contribute to, and assess the societal ramifications of the UK government's energy policy decisions.

- The UK government's prioritisation of energy security via North Sea gas extraction clashes with its climate commitments. This has resulted in legal challenges, highlighting inconsistencies between energy policy and climate legislation. For instance, Oceana UK challenges the government in the High Court over 28 licences for oil and gas exploration. The licensing round's 82 licences will likely produce 600 million barrels of oil equivalent.

- Future fossil fuel investment needs curtailment to meet immediate climate goals and facilitate a transition to alternative energy sources. Short-term trade-offs between energy security and climate objectives are inevitable. The decarbonisation of the UK's energy system hinges on renewable energy sources; however, their intermittent nature, susceptibility to weather conditions, and limited storage capabilities currently preclude them from meeting national energy demands in their entirety. Furthermore, the United Kingdom's aging energy infrastructure requires substantial modernisation to accommodate the fluctuating nature of renewable energy sources.

- Therefore, a pragmatic pathway that balances immediate security with long-term sustainability goals. Investment across diverse energy technologies is essential for a secure and competitive future, which could entail the closing of tax loopholes. Evidenced in the 'windfall tax' (Energy Profits Levy) implemented by the government, which contains "generous" investment allowances. This loophole enables oil and gas companies to claw back roughly £45 for every £100 spent on new UK oil and gas projects.

Key Messages

1. **Energy security and the transition to cleaner energy sources are mutually reinforcing in the pursuit of energy resilience;** the UK's policy framework must explicitly acknowledge this synergy.

2. **Policy consistency is crucial:** Investors need clear, consistent signals from the government to commit to the substantial investments required for renewable infrastructure. The failure of Britishvolt, a UK-based startup in the battery sector, underscored inconsistencies in the national government's industrial policy, particularly its backing of electric vehicles and environmentally friendly technological advancements. Predictable and stable governmental policies in the UK cultivate greater business confidence in long-term investment, thus reducing risk perception and encouraging investment. Private-sector investment is essential for the UK meeting Net Zero goals. It is estimated that private sector investment will need to account for more than 70% of total clean energy funding.

3. **To address energy needs, the UK requires a two-pronged approach:** immediate actions to ensure energy security and expedited investment in renewable energy infrastructure, including clear timelines for the reduction of fossil fuel use.

"Predictable and stable governmental policies in the UK cultivate greater business confidence in long-term investment, thus reducing risk perception and encouraging investment."

Policy Implications

The intertwined nature of energy security and energy transition highlights the need for the UK government to balance emission reduction goals with secure energy supplies. A pragmatic outlook suggests hydrocarbons will still play a significant role in achieving energy security. Navigating this complex landscape demands a comprehensive policy approach, rational analysis of socio-economic issues, and a balanced pathway for energy transition while maintaining energy security.

The UK government's energy policies are a response to the current global energy crisis, aiming to simultaneously achieve energy security and climate goals. The government must pursue climate action and net-zero transition through consistent policies, acknowledging the challenges and costs involved, even though energy security is currently prioritised globally. Strategic planning is required to resolve the policy tension between immediate energy security concerns and the imperative of systematic decarbonisation.

Such planning must create a framework that assures investors and guarantees that the UK meets its climate commitments. The following policy framework is proposed to address the tension between immediate energy security and systematic decarbonisation; it is structured around short-term (1-3 years), medium-term (3-5 years), and long-term (5+ years) objectives:

Strategic Planning Framework

01

Short-Term

1-3 Years

- Establish an emissions accountability framework for new fossil fuel developments
- Reform renewable subsidies to attract international investment.
- **Immediate Investments:** Allocate funding for existing renewable projects and CCUS technologies to enhance energy security while reducing emissions.
- **Regulatory Assurance:** Implement clear regulations that provide certainty for investors in low-carbon technologies and infrastructure.
- **Emergency Response Plans:** Develop contingency plans to address potential energy supply disruptions, ensuring that the transition does not compromise energy availability.

02

Medium-Term

3-5 Years

- Create an integrated energy plan addressing infrastructure and green technology incentives.
- Establish an energy resilience organisation focused on new technologies.
- Implement policy safeguards aligning energy security with climate goals.
- **Infrastructure Development:** Invest in the necessary infrastructure for hydrogen production and distribution, alongside expanding renewable energy capacity.
- **Market Mechanisms:** Introduce market mechanisms that incentivise the reduction of carbon emissions, such as carbon pricing or trading schemes.
- **Public-Private Partnerships:** Foster partnerships between government and the private sector to drive innovation in low-carbon technologies and ensure a steady transition away from hydrocarbons.

03

Long-Term

5+ Years

- Reduce subsidies for fossil fuels, also expanding backing for renewables.
- Set clear timelines for fossil fuel phase-down.
- Strengthen international partnerships for global energy security and transition.
- **Comprehensive Energy** Strategy: Develop a comprehensive energy strategy that integrates renewable energy, hydrogen, and CCUS into a cohesive framework for energy security and decarbonisation.
- **Global Leadership:** Position the UK as a global leader in climate action by committing to ambitious emissions reduction targets and sharing best practices internationally.
- **Continuous Review and Adaptation:** Establish a framework for a continuous review of energy policies and technologies to adapt to changing circumstances and ensure ongoing alignment with climate commitments.

The Research Team

The Taylor & Francis Group supports diverse communities of experts, researchers and knowledge makers around the world to accelerate and maximise the impact of their work. Our expertise, built on an academic publishing heritage of over 200 years, advances trusted knowledge that fosters human progress. **Dr Victor Azubike** is a recognised global expert in energy and natural resources law, specialising in energy security, oil and gas, mineral contractual arrangements, and energy transition strategies.

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