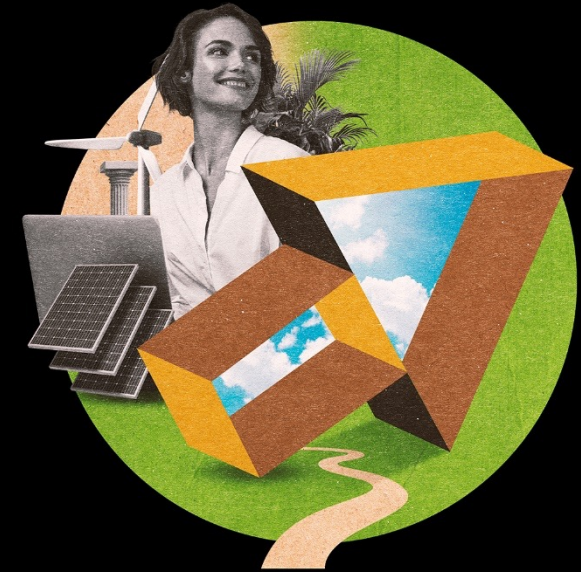


Turbocharging the UK's Economy in pursuit of Net Zero

An exclusive, interactive day of learning and debate, where the UK's leaders in business, the public sector, academia and politics will collaborate to drive UK economic growth through sustainability and climate action.

Breakout group conversations are focused on tangible growth opportunities for the UK. This document provides a briefing on the growth opportunity you will be exploring in the breakout out group you have been assigned to during the 13:30 to 15:15 slot.



Turning the largest Public and Third Sector Energy users into net power producers

- **Public and third sector organisations** are amongst the largest landowners in the UK. According to publicly available estimates, the MOD owns ~226,000ha (and has direct control over a further ~207,000ha), Crown Estate manages ~75,000ha, and the National Trust owns ~250,000ha. Together this amounts to ~3% of the UK's total land mass.
- Experimental Deloitte analysis suggests that if just **1%** of this land were used for **solar**, this could produce a total generating capacity of between 4.4GW and 9.6GW, or 6.3% -13% of the UK's 2030 solar capacity target of 70GW.
- In a world of **historically high power prices**, the ability to produce, store and optimise energy has never been more important. The MOD spent ~£460m on energy in 2022, up from ~£340m in 2021. Crown Estate spent ~£23m on energy in 2022, up from ~£14m in 2021. And National Trust's operating costs rose **by 24%** in the same period.
- Whilst many public and third sector landowners are well down the path of renewables deployment, are they **maximising the potential upside** in terms of reduced costs and new revenue? And what is getting in the way?
- Deloitte's hypothesis is that the largest landowners should aim to be **net power producers**, whilst those with smaller land holdings should be seeking to minimise their reliance on power purchased in the retail market.
- The **benefits to the UK economy** would be significant. Installing 1GW of ground mounted solar involves a capital investment of ~£795m. Building 4.4GW – 9.6GW of solar would involve investment of between **£3bn and £7.6bn**.
- This investment would provide a direct contribution to **UK productivity and GDP growth** but would also lead to spillover benefits including solar supply chain development, job creation and the narrowing of regional inequalities.
- As landowners, public and third sector organisations would be in a strong position to **negotiate these benefits**, which would in turn set the standard for the wider industry.
- The deeper the penetration of renewables, the more **resilient the UK economy will be** to future shocks and disruptions to energy supply chains. By deploying renewables at scale large public and third sector orgs could provide the foundation of future economic security.

In your breakout group you will...

- **Discuss the size of this opportunity** for the UK with a cross-industry group of leaders
- **Consider the barriers** that are currently getting in the way of the UK realising this opportunity
- **Explore the levers** that breakout group participants could pull to overcome these barriers
- **Identify opportunities** to work together with other breakout group participants to accelerate progress



Delays associated with planning and grid connection hold back the deployment of renewables in the UK.

Our hypothesis is that large public and third sector landowners are uniquely placed to overcome these barriers, due to the relative simplicity of land ownership arrangements and the potential for existing grid connections.

But competing priorities and the costs associated with renewable deployment constrain ambition.

Together, could we unlock the full energy potential of large public and third sector energy users?

Barriers to large Public and Third Sector landowners becoming net power producers

Planning and proximity

Barrier: Solar farms with a generating capacity above 50 MW are classed as nationally significant infrastructure projects (NSIPs). This means they don't need planning permission but do require development consent. Development consent takes 12-15 months to obtain, but it also involves pre-application processes which can last significantly longer. Sub-50MW solar farms require planning permission from the local planning authority, which can lead to delays associated with local objections. Planning for onshore wind farms is significantly more complex, despite recent changes.

Possible solutions: The complexity of landownership arrangements is a significant contributor to the extent of delays associated with planning, both for NSIPs and sub 50MW solar farms. These arrangements can be more straightforward for large public and third sector landowners, which are more likely to hold exclusive title to the land they use. Organisations that hold land that is far from residential centres are particularly well placed to overcome delays associated with planning.

Cables and connections

Barrier: 40% of renewable developments face a wait for grid connections of over a year, with £200bn worth of projects currently stuck in the queue. These delays are partly due to a lack of physical electricity network infrastructure (cables, transformers and substations) in the places they are needed and partly due to historical issues with the connection process that clog up the system – for example the submission of speculative applications relating to projects that have not yet secured planning permission.

Possible solutions: Gov, Ofgem, the ESO and networks have released an action plan that commits to ensuring that all projects receive a connection date no longer than six months after the date requested. This plan will take time to implement. In the meantime, organisations with land that is close to existing high voltage substations are well placed to jump to the head of the queue. Many energy intensive public and third sector energy users – including schools, hospitals, and military bases - are more likely to be in this position due to the importance of secure supply.

Perceptions and priorities

Barrier: In legacy energy systems, large organisations are passive consumers of power, reliant on the retail market for their energy supply and exposed to global price volatility. In emergent energy systems large organisations can be active participants in power markets, harnessing their land to minimise consumption of expensive imported power whilst generating new revenues. Many large organisations are stuck in the old paradigm and even those that aren't frequently find themselves constrained by competing priorities for its use, such as the construction of housing.

Possible solutions: There is a growing recognition that energy can be a source of value creation for organisations with land and other assets. In a world of a 4x demand for clean power, any organisation that can generate, store and optimise its own energy will be significantly rewarded. And whilst some land – particularly land close to existing residential centres – is always likely to be prioritised for other things, some has little value for anything other than energy. The business case is increasingly clear.

Costs and accounting

Barrier: The capital costs and balance sheet implications associated with utility scale energy generation can be prohibitive for public and third sector organisations, despite a reported industry standard return on investment of between 10% and 20% over a 5-to-10-year time horizon. The larger the project, the less likely it is that an organisation will be willing to use its own balance sheet to provide financing (despite beneficial rates associated with Public Works Loan Board lending for public sector orgs). The impact is to constrain ambition, limiting project size and the scale of potential savings/revenues.

Possible solutions: There is no shortage of project finance available, with a growing number of institutional investors looking for ways to deploy their capital towards net zero. The challenge is to match this financing to public and third sector landowners with the appetite to deploy renewables at scale. Commercial structures can be designed to match the unique circumstances of each landowner and to maximise long term benefit through reduced energy bills (utilising PPAs) and/or through profit share arrangements.

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Additional Resources:

[Where is the UK on its energy transition?](#), Deloitte 2023

[Journey to Net Zero](#), Deloitte 2022

[MOD's Transition to Net Zero](#), Deloitte 2022