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THE ECONOMIC IMPACT OF DRAX GROUP IN THE UK

OCTOBER 2017

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October 2017

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EXECUTIVE SUMMARY

Drax Group plc is a large British energy company. It has three principal activities: generating electricity, providing electricity, gas and energy services to businesses, and processing compressed wood pellets for use in electricity production.

Drax Power Station is the largest power station in the UK, a nationally significant energy asset, supplying enough electricity for six million homes. In recent years, half of the power station has been converted to use compressed wood pellets instead of coal. In doing so, it has become the country's single largest source of renewable power, generating 16 percent of Great Britain's renewable electricity in 2016.

Haven Power and Opus Energy, both part of the Drax Group, are leading retail companies that together supply energy to over 340,000 British business meters. Along with Billington Bioenergy, a supplier of wood pellets for renewable heat, these companies work closely with their customers to help them use energy sustainably and more efficiently.

Through generating and selling energy, Drax Group supports a significant volume of employment and economic activity across the UK. This report quantifies Drax Group's economic contribution in 2016 by analysing the direct, indirect and induced impact of the Group's operations.

In total, Drax Group's operations contributed nearly £1.7 billion to UK GDP in 2016. This figure includes the value created by the Group's production and supply of wholesale energy, the activity across the Group's supply chain that is attributable to its demand for inputs, and the wages that its staff (and suppliers' staff) spend in the wider consumer economy.

One-quarter of this GDP impact, equivalent to £419 million, was generated in the Yorkshire and the Humber region, home of Drax Power Station. The Group also contributed a sizeable economic impact in the regions where Haven Power and Opus Energy are based. Their operations in Cardiff, Ipswich, Northampton and Oxford helped to generate a £633 million GDP impact (38 percent of the Group's total in 2016) across the East Midlands, East of England, South East and Wales.

In addition to these contributions to economic output, 18,500 jobs across the UK were supported by Drax Group in 2016. One-third of this employment impact, equivalent to 6,000 jobs, was felt in the north of England, highlighting the Group's importance to employment across the region.

6 million

Homes powered by Drax Power Station in 2016

340,000

Business customers powered by Haven Power and Opus Energy

£1.67 billion

Drax Group's total GDP contribution in 2016; supporting 18,500 jobs

1. INTRODUCTION

Drax Group plc commissioned Oxford Economics to investigate its economic impact in the UK in 2016.¹ This analysis is an update of research undertaken previously by Oxford Economics for Drax, published in September 2016, that quantified the Group's economic impact during 2015.

1.1 DRAX GROUP

Drax Group is a large British energy company that is playing an important role in the UK's transition towards a low-carbon future. In recent years, half of Drax Power Station—a nationally significant energy asset—has been converted to use sustainably-sourced wood pellets instead of coal. In doing so, it has become the single largest source of renewable power in the country, generating 16 percent of the UK's total renewable electricity in 2016.

In December 2016, Drax announced its new business strategy, focusing on providing greater flexibility to the country's electricity grid to complement the rise in intermittent wind and solar generation. This flexibility will be provided through Drax Power Station and the construction of a number of new rapid-response gas-fired power stations across the country.

As part of this new strategy, Drax also completed its acquisition of Opus Energy in February 2017. Through this acquisition, Drax's retail business will supply more British companies with gas and electricity and work with them to use energy more efficiently.²

The Group's three principal activities are generating electricity; supplying energy and energy services to businesses; and making compressed wood pellets for use in electricity production. Drax has several businesses working across the energy sector in the UK, that are considered in this report. We present results broken down into the following entities:

- **Drax Power**, Drax's generation business that owns and operates Drax Power Station in North Yorkshire. In our analysis, the activities of the Group's head office are included within this entity;
- **Haven Power**, a leading supplier of energy to industrial and commercial users;
- **Opus Energy**, one of the largest suppliers of energy to small and medium-sized enterprises (SMEs) in the UK;
- **Billington Bioenergy**, which supplies wood pellets to homes and non-domestic users who use bioenergy for renewable heat.

Drax employs over 2,000 people across offices in Cardiff, Ipswich, Liverpool, London, Oxford, Northampton and Selby.

¹ The economic impact of Drax Biomass Inc., Drax's subsidiary based in the United States, falls outside the remit of this study.

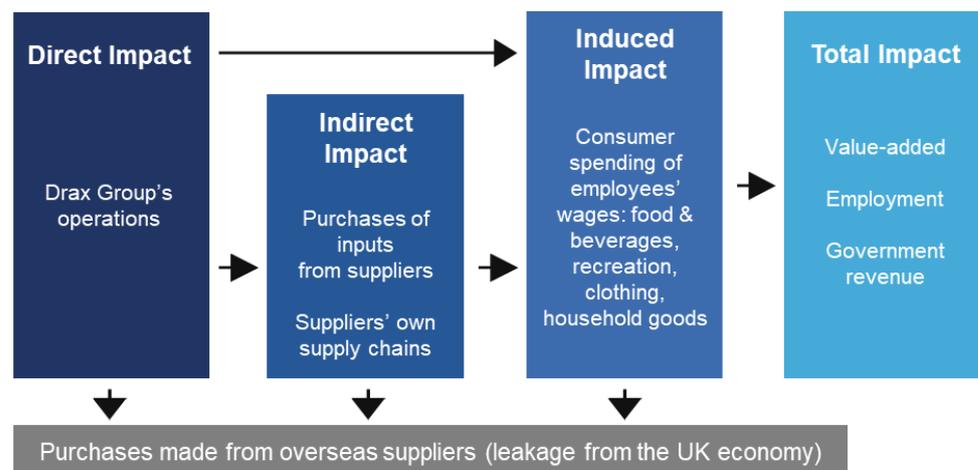
² This analysis includes an assessment of Opus Energy's economic impact during 2016, despite its acquisition by Drax Group not being completed until 2017.

1.2 METHODOLOGICAL OUTLINE

Oxford Economics assessed the economic benefits of Drax Group using a standard means of analysis, called an economic impact assessment. Three 'core' channels of impact are considered: termed the direct, indirect and induced impact. These can be understood as follows:

- Its **direct impact** relates to the Group's own activities, such as the GDP it generates and its direct employment. When assessing the impact of investment (as in the latter two areas of the study) the direct impact describes the output and jobs supported among firms directly contracted to deliver the investment programmes. This includes construction, as well as the businesses providing other inputs such as manufactured goods, transportation and technical services;
- Its **indirect impact** encapsulates the activity and employment supported in the Group's, or contractors' supply chains as a result of their procurement of goods and services; and,
- Its **induced impact**, comprising the wider economic benefits that arise when employees within the Group and contractors, and their supply chain spend their earnings, for example in local retail and leisure establishments.

Fig. 1. The channels of Drax Group's economic impact



These economic impacts can be measured in one of three ways:

- *GDP*, or more specifically, the Group's gross value added (GVA) contribution to GDP;
- *Employment* meaning the number of people employed, measured on a headcount basis; and,
- *Tax revenue*, the estimated fiscal contribution resulting from corporate activity and employment sustained by the Group.

The calculations undertaken to quantify these impacts draw upon data supplied by Drax Group. The modelling is conducted using an Input-Output (I-O) based model of the UK economy, and regional modules describing the economies of its constituent nations and regions. This model was constructed by Oxford Economics, using macroeconomic, employment and tax data published by the Office for National Statistics (ONS) and HMRC.

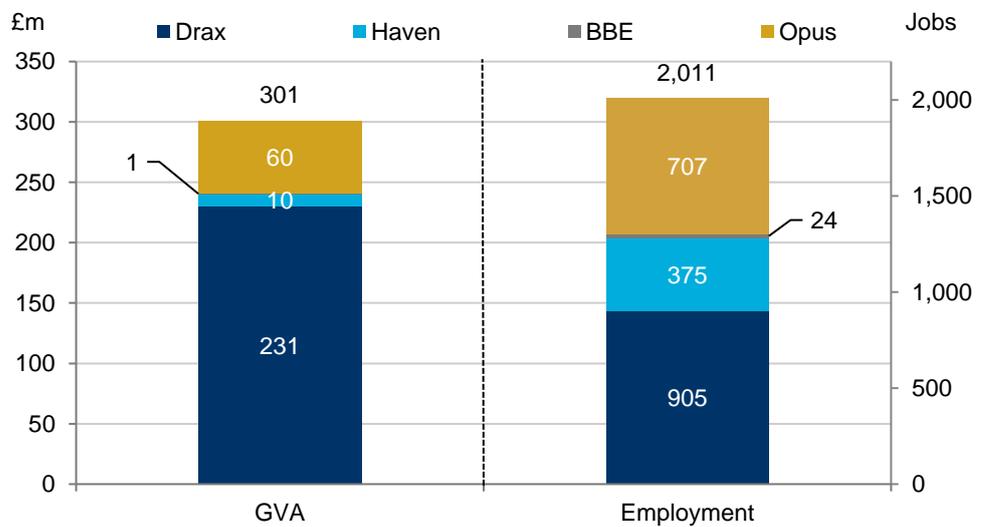
2. RESULTS

2.1 DIRECT IMPACT

The entities comprising Drax Group contributed **£301 million to UK GDP** during 2016. This is equivalent to the sum of the gross profits it earned, and the gross wages paid to its workers, and represents a rise of 6.1 percent relative to 2015.

The Group also employed some **2,011 workers in 2016**, measured as the average of monthly employment levels during the year.

Fig. 1: Direct impact of Drax Group, by entity, 2016



Source: Drax Group, Oxford Economics

In addition to these GVA and employment contributions, the Group directly generated around **£93 million in tax revenues**.

This total is made up of Corporation Tax and business rates paid by the Group, and product-specific taxes (such as carbon costs and Waste Levy) levied on the Group's activities. Also included are the labour taxes of its direct workforce, such as income tax, and employers' and employees' National Insurance Contributions (NICs).

2.2 INDIRECT IMPACT

The Group's indirect impact on the UK economy is driven by its procurement of goods and services from other domestic businesses. In order to avert double-counting, this indirect impact excludes the spending between the various entities of Drax Group. The economic benefits of this spending are already captured within the direct impact, discussed above.

Drax Group's external spending reached £872 million in 2016. Fig. 2 below sets out the industries across which this external procurement was distributed.

£301m

Drax Group's direct contribution to GDP in 2016

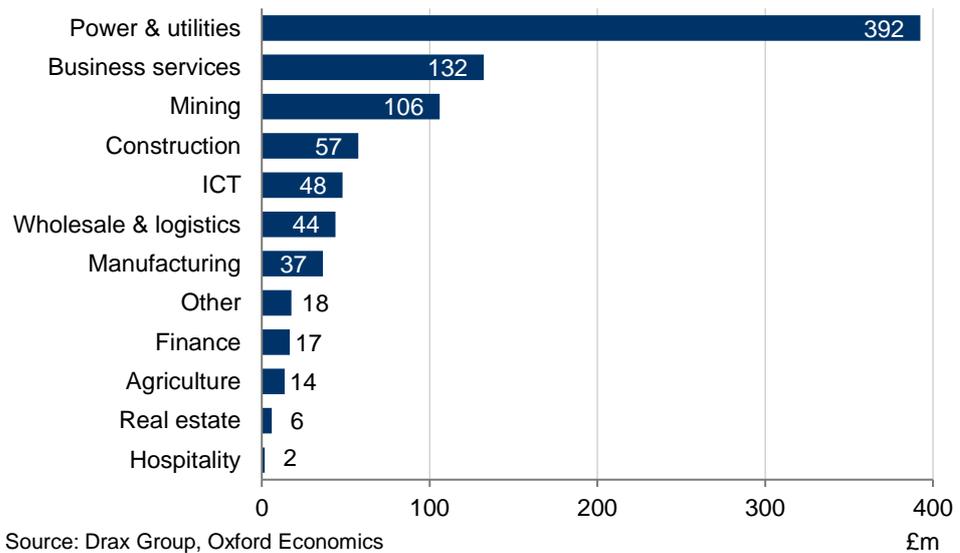
Along with a direct jobs impact of over 2,000 workers

£872m

Drax Group's spending with UK suppliers during 2016

Excluding purchases between Drax Group companies

Fig. 2: Group external procurement in the UK, by sector, 2016



In order to meet the intermediate demands of Drax Group, these businesses make purchases from their own suppliers, and so on down the supply chain. The sum of all these supply chain interactions produces the indirect impact, that ripples out across the regions and nations of the UK.

The Group's indirect impact supported £908 million in GVA during 2016, while supporting over 10,300 jobs throughout the UK. The Group's very large jobs contribution (relative to its own direct employment) reflects the capital-intensive nature of its activities: power generation involves spending vast sums with industries that have relatively more labour-intensive characteristics.

The Group's indirect GVA impact in 2016 is estimated to be around 40 percent larger than it was in 2015, while its indirect employment impact rose by around a third (34 percent) year-on-year. These increases are primarily driven by the addition of Opus Energy to the Group. Fig. 3 below sets out the geographic distribution of the indirect GVA and employment impacts.

In addition, an estimated £234 million in tax revenues were indirectly generated by the Group in 2016. This figure is made up of the taxes on profits, purchases and wages that are attributable to Drax Group's domestic supply chain activity.

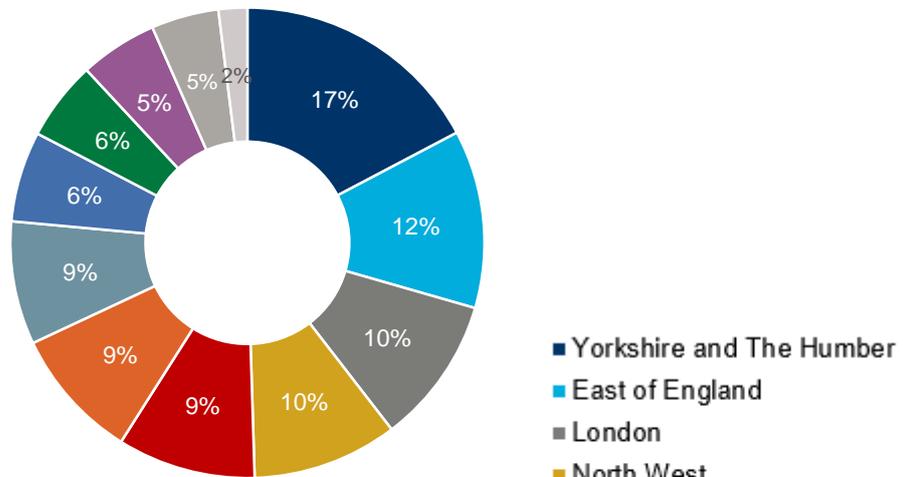
10,300

Jobs supported indirectly by
Drax Group during 2016

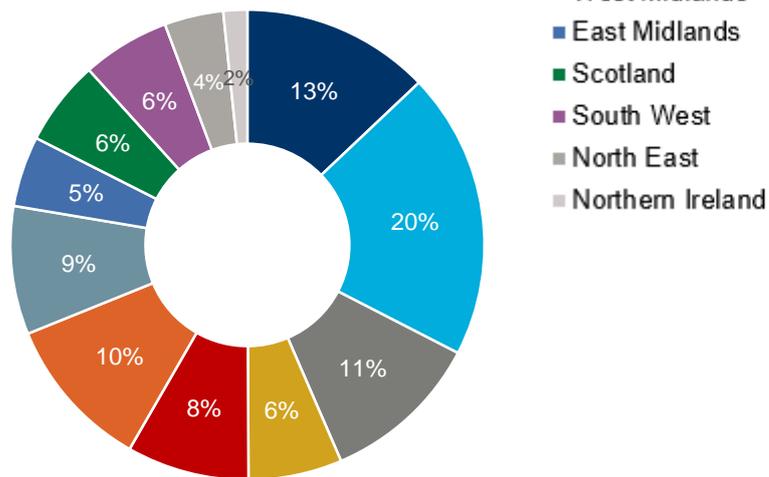
*Alongside a GDP
contribution of £908 million*

Fig. 3: Regional distribution of Drax Group's indirect impact, 2016

Contribution to employment



Contribution to GDP



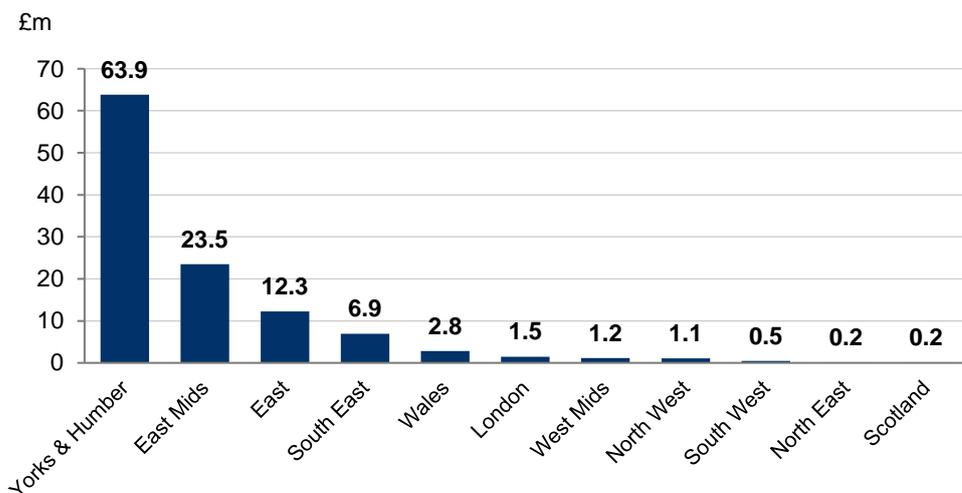
Source: Drax Group, Oxford Economics

2.3 INDUCED IMPACT

Drax Group paid £114 million in gross employee compensation during 2016. This figure encompasses wages and salaries, pensions contributions, share-based payments and compensation costs (where relevant).

This remuneration supported household consumption across all regions of the UK, as shown in Fig. 4 below. The following analysis rests upon the simplifying assumption that salary income is spent in the region where the recipient employee is resident.

Fig. 4: Wages and salaries paid by Drax Group, by region of employee residence, 2016



Source: Drax Group, Oxford Economics

A portion of these salaries are spent in the consumer economy, for example in retail and leisure outlets. In addition, the wages paid to employees of firms within Drax Group's supply chains also support further consumption spending. Further, in order to meet this induced demand, retail and leisure businesses draw upon their supply chains, producing a further supply-chain effect that is also a part of Drax Group's induced impact. These factors explain why the Group's induced impact is much broader (in geographic terms) than the distribution of its direct wage payments.

We estimate that Drax Group's induced GVA impact reached £464 million in 2016. Its induced impact also supported 6,100 jobs across all nations and regions of the UK, as illustrated in Fig. 5 below.

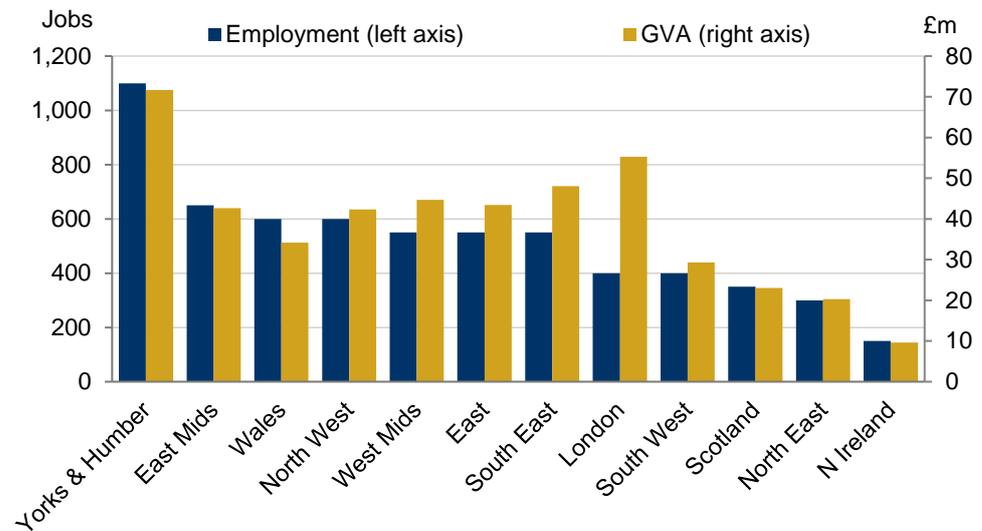
This induced activity was also associated with tax revenues of £135 million. This sum encompasses all the taxes on profits, wages and procurement discussed previously; while also including the VAT accrued as a result of Drax Group's induced consumption impact.

£464m

Induced GDP contribution of
Drax Group in 2016

*Accompanied by an induced
employment impact of over
6,100 jobs*

Fig. 5: Induced impact, by region, 2016

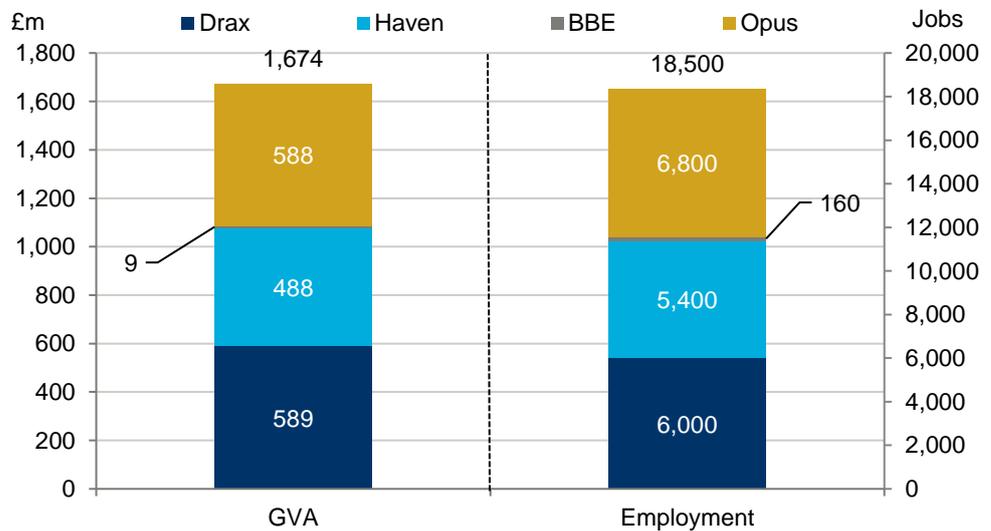


Source: Drax Group, Oxford Economics

2.4 TOTAL IMPACT

By adding the three channels discussed above, we arrive at our estimates for the total impact of Drax Group’s activities during 2016. This can be considered the Group’s ‘footprint’ on the UK economy in that year.

Fig. 6: Total impact of Drax Group, by entity, 2016

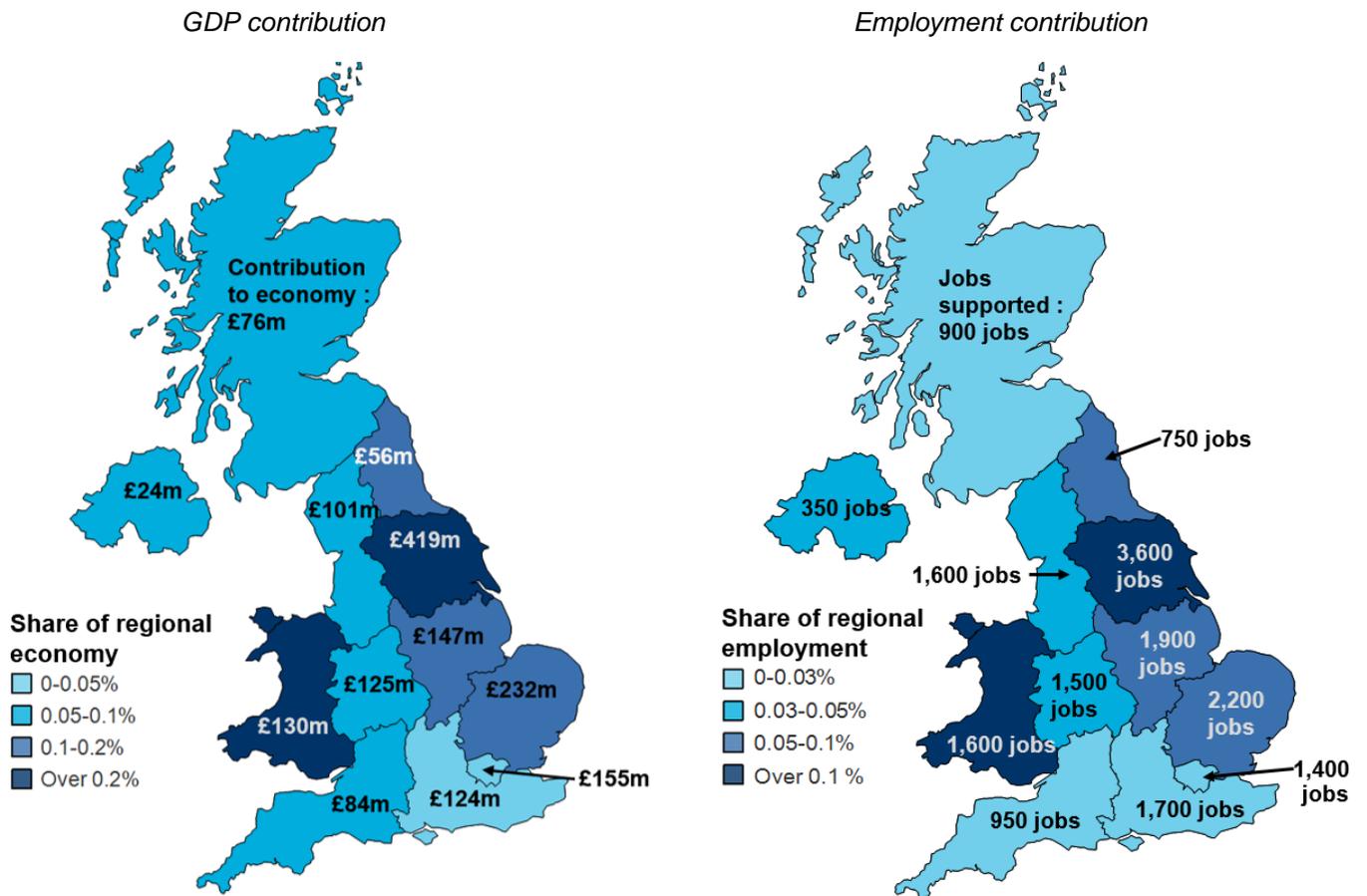


Source: Drax Group, Oxford Economics. Totals may not sum due to rounding.

£1.7 bn
 Total GDP contribution of Drax Group in 2016
 Along with 18,500 jobs throughout the UK

We estimate that Drax Group’s activities generated around £1.7 billion in GVA during 2016, whilst supporting around 18,500 jobs. In doing so, the Group supported an estimated £462 million in revenues for the Exchequer.

Fig. 7: Drax Group's total impact across the UK, 2016





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