



## Delivering the Green Transition

What are the challenges for network industries?  
(focus on energy)

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# Britain has a diverse set of energy consumers – with very different needs

## Ofgem's principal objective to protect the interests of current and future energy consumers covers both households and businesses



### Domestic consumers: 29.5m households

- Domestic consumers are diverse, in terms of their energy usage (when, what and how much), behaviours (level of engagement with energy system) and needs.
- 24.3m are connected to the gas grid, so use electricity and gas. Others use alternative sources, traditionally electric (expensive), oil boilers (high carbon) or newer systems, such as heat pumps or heat networks.
- Most pay by monthly direct debit, but important minority groups are on pre-payment meters or standard billing
- Across consumers there are a range of vulnerabilities:
  - Government estimate 4.7m GB households are in fuel poverty although wider estimates are much higher.
  - There are a wide range of further social, medical and mental health needs that also need to be considered.



### Non domestic consumers: over 5.5mn diverse consumers

- The non-domestic energy market is much more variable, ranging from small businesses through to large energy users (such as steelworks)
  - 5.3m 'microbusinesses'
  - 250k small/ medium sized enterprises
  - 8k large industrial and commercial users (with significant variation in needs within this group)
- There are fewer regulatory protections (e.g. no price cap or universal service obligation) in place for non-domestic consumers.
- There are also an estimated 900,000 households who are supplied via non-domestic contracts and don't have full domestic protections.

# There are three public institutions that will drive change across the energy sector



## UK Government

### Democratically accountable

Responsible for setting the policy and regulatory framework for the gas and electricity sectors in the UK.

Department for Energy Security & Net Zero (DESNZ), sponsor department for Ofgem.

#### Responsibilities:

- delivering security of energy supply
- ensuring properly functioning energy markets
- encouraging greater energy efficiency
- seizing the opportunities of net zero to lead the world in new green industries

Strategy and Policy Statement further guides Ofgem & the System Operator objectives.



### Independent energy regulator of Great Britain.

Non-ministerial department, directly accountable to UK Parliament for performance of functions and duties.

Priorities defined by principal objective: **protect the interests of current and future energy consumers.**

#### Have regard to:

- security of power & gas supply
- efficiency + financeability
- Net zero
- interests of the 'vulnerable'

Funded by levy on industry paid for by consumers through bills.



Electricity system operator **ensures the reliable delivery of electricity** at efficient cost.

Manages system balance and operability, facilitates competitive markets and whole system outcomes.

In 2022, we set out our joint commitment with DESNZ to proceed with the creation of the **Future System Operation (FSO)**, as an expert, impartial body with an important duty to facilitate net zero whilst also maintaining a resilient, and affordable system. This was incorporated in autumn 2024 as the NESO.

The NESO will carry out all functions of the ESO. Ofgem will continue to regulate the entity.

Change in relationships and need for greater co-ordination over time brings opportunities and risks

## The green transition provides real opportunities: but there are important risks

### Opportunities

- Shift to renewable energy has the potential to reduce bills for consumers
- Moving away from fossil fuels will reduce volatility in energy bills
- The green transition provides incentives for innovation: those consumers that want to could benefit from a greater range of services, improving market outcomes
- Opportunity for the whole system to benefit from the investments in co-ordination triggered by the need to meet transition targets (but also risks around adaptation)

### Risks

- New consumer harms arise from new sources of energy + new products that are hard to predict
- The plans for the transition are very hard to deliver – supply chain issues and technical uncertainty
- Uncertain and hard to measure effects on resilience
- Consumers (including business consumers) do not respond to price signals, system costs rise and competition does not deliver (either due to market failure or because regulation does not keep up)
- Risks that the transition is seen as unfair (ie. adverse distributional outcomes) – either actual or perceived – with adverse effects on consumer engagement