



Purpose and vision

A distribution system operator (DSO) stands to actively manage local electricity networks; enabling flexibility, decarbonisation, and customer participation. Social DSO is an extension of DSO that embeds social value, inclusivity, and fairness into traditional technical and economic optimisation. At Scottish Power Electricity North West (SP ENW), our social DSO strategy is designed to ensure that the transition to a net zero energy system is just and beneficial to all communities across the North West, exemplified below in **Figure 1**.

The energy transition presents both opportunities and risks - without deliberate action, vulnerable communities could be left behind. Our social DSO exists to ensure that no one is excluded from the benefits of decarbonisation through the integration of social value into all aspects of our operations – from planning and forecasting, to investment and stakeholder engagement. Our current cost-benefit analysis (CBA) model informs investment decisions, ensuring that financial, carbon, and system benefits are captured in line with industry best practice. Building on this foundation, we are enhancing the CBA and introducing a novel social return on investment (SROI) component to measure the wider societal impacts of our social DSO initiatives. Together, this integrated approach will align with Ofgem's ED2 framework and the principles of HM Treasury's Green Book, ensuring that our decisions reflect not only economic efficiency but also equitable social benefits to all our communities.

This work is being developed in parallel with our DSO Stakeholder Panel, so that our tools reflect the priorities of the communities and partners we serve. It provides a structured forum for engaging with a diverse range of stakeholders – including local authorities, community representatives, and industry partners – to ensure our decisions reflect regional priorities and social outcomes.



Figure 1. Our social DSO vision on the path to net-zero 2050.

Maximising consumer value in ED2

We are the first distribution network operator (DNO) to implement a social DSO strategy at scale. Our initiatives are helping to keep customer bills as low as possible by deploying innovative, forward-looking strategies that optimise network efficiency and unlock cost savings – even as our infrastructure grows and evolves with demand. The strategy integrates advanced network management, flexibility services, and smart grid solutions with robust decision-making tools.



The following benefit vectors below in **Figure 2** highlight the value delivered across our network and to society, demonstrating how our social initiatives translate into measurable outcomes; from cost savings and faster connections, to enhanced system flexibility and consumer benefits.

Co-created and published our Social DSO Strategy

voltage (EHV) levels and 33% at high

voltage (HV) levels

through

co-ordinated network

development

For every £1 of network cost savings we deliver for connected customers we deliver nearly £3 of additional benefits to the wider energy system and society

Reduction in reinforcement costs by 20% at extra high 100,000 homes benefiting from Smart Street with £40 per home per year energy

Accelerated generation customers by six years and demand by four years through flexible connections

Despatched 4,349 MWh of flexibility
– more than ever before

Smart network optimisation

capable of delivering 5-30% of additional headroom at

An increase in network monitoring from 20-25% of sites

Figure 2. Realised benefits from the start of ED2 to date from social DSO activities.

Translating strategy into benefits

Our DSO activities are already enabling smarter, fairer and more inclusive outcomes for the communities we serve.

We are actively embedding our social DSO strategy in ED2, ensuring that the tools and frameworks we use today are delivering tangible consumer value. Through the integration of wider social value into our investment tools, we are making better decisions that reflect the needs of all our customers. These tools are being used now to shape how we prioritise investment, engage with stakeholders and deliver benefits across the North West. Building on what we have already delivered, the benefits below are what we will deliver through ED2.

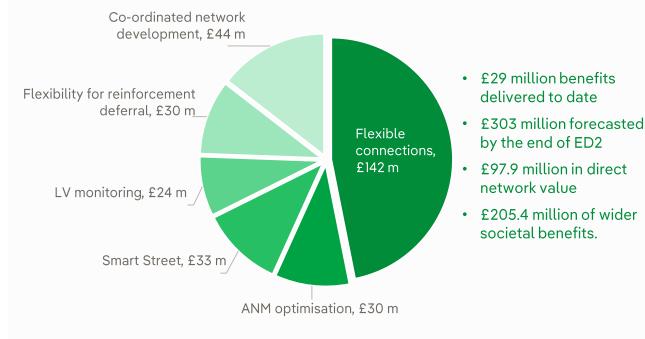


Figure 3. Forecasted financial impacts of social DSO across ED2



Alongside the financial, carbon, and system benefits measured by our current CBA model, the introduction of the wider SROI tool will enable us to capture the further-reaching impacts of our social DSO initiatives, **shown in table 1 below**. This enhanced approach demonstrates that, on the journey to achieving net zero by 2050, we are committed to ensuring no one is left behind - socially, financially, or in terms of energy access. By explicitly addressing the needs of vulnerable and fuel-poor customers, the wider SROI framework exemplifies our social DSO vision: *leading the way to an electrified future that is fair, inclusive, and accessible for all.*

Enhancing our CBA tool

To strengthen decision-making and ensure credible, transparent outcomes, we are evolving our CBA framework with advanced features and wider benefits data integration.

- **Time-based foundation**: The tool applies a structured, time-based approach to quantify tangible benefits over defined benefit periods
- **Data-driven insights**: It incorporates stakeholder-informed datasets, including our Distribution Future Energy Scenarios (DFES), to deliver outputs that are both robust and testable
- Credible social value: Wider SROI proxies and reference data are sourced from trusted publications and aligned with HM Treasury's Green Book principles for consistency and credibility
- Systematic SROI integration: Non-market outcomes are quantified using validated proxy values, introducing a method for assessing further-reaching social impact
- **High confidence**: The model accounts for attribution, deadweight, and persistence to reflect credible counterfactuals, ensuring defensible estimates of net social value

Outcome	Benefit	Stakeholder	Category
New electric vehicles (EVs) connected to the network			
Fewer hospital attendances due to improved air quality from a reduction in nitrogen oxide emissions	Avoided costs	NHS	Financial
Reduced average running costs compared to traditional combustion engine vehicles	Consumer cost savings	Connected customers	
Reduced carbon dioxide emissions	Lower greenhouse gas emissions	Wider society	Environmental
New heat pumps (HPs) and photovoltaics (PVs) connected to the network			
Reduced carbon dioxide emissions	Reduced greenhouse gas emissions	Wider society and connected customers	Environmental
Reduced consumer electricity consumption	Consumer cost savings		Financial
New housing developments			
Enablement of local authority and government initiatives to support population growth	New houses	Wider society and connected customers	Social
Increased access to affordable homes			
Job creation	Economic growth		
Stimulation of local economy through additional spending by new residents			Financial

Table 1. The outcomes and resultants benefits measured by the new SROI tool.



Smarter networks

We are delivering smarter and more resilient networks today, embedding data-driven decision-making and system flexibility into our ED2 operations to support a fair, inclusive and decarbonised energy system.

Our smart grid investments are enabling real-time, responsive and efficient network operation:

- DSO-led forecasting is now central to our planning, supporting a whole-system approach and improving coordination across the energy system whilst reducing network development costs
- Our active network management (ANM) tool is already unlocking additional headroom, accelerating customer connections and fostering economic growth
- Smart Street is reducing energy consumption and improving power quality for over 100,000 homes
 directly reducing bills for our customers

More information about our ANM tool and Smart Street can be found on our website.

Reach out. Engage. Collaborate with us.

As we progress through ED2, our social DSO approach is focused on delivering inclusive, equitable outcomes for all customers and communities. We recognise that achieving this vision requires ongoing dialogue, transparency, and collaboration.

We welcome feedback, challenge, and perspectives. Your insights will help us refine our approach, address emerging needs, and ensure no one is left behind in the transition to a smarter, more sustainable energy system. Please get in touch to share your views and help shape the future of the Social DSO.

To find out more, take a look at our <u>Social DSO strategy</u>. Or if you have any questions about DSO, please <u>get in touch</u>.

www.enwl.co.uk/dso

