FLEX FACTOR

HOW GOVERNMENT CAN KEEP NETWORK COSTS ON BILLS DOWN

Joshua Emden
and **Tazu Walden**

April 2026

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IPPR
8 Storey's Gate
London
SW1P 3AY
E: info@ippr.org
www.ippr.org
Registered charity no: 800065 (England and Wales),
SC046557 (Scotland)

This paper was first published in April 2026.

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ABOUT THE AUTHOR

Joshua Emden is a senior research fellow at IPPR.

Tazu Walden is a researcher at IPPR.

ACKNOWLEDGEMENTS

We would like to think our colleagues and stakeholders we spoke to throughout this process for providing their time and insights into this research.

We would also like to thank European Climate Foundation for their support in making this report possible."

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Citation
If you are using this document in your own writing, our preferred citation is:
Emden J and Walden T (2026) *Flex factor: How government can keep network costs on bills down*, IPPR.
http://www.ippr.org/articles/flex-factor-network-costs

SUMMARY

Delivering a clean, secure electricity system is essential for a growing economy and for bringing down energy bills. This system will be built on expanded and modernised electricity networks.

These upgrades are necessary and ultimately beneficial for households, but they come with difficulties. Network costs – the component of energy bills that pays for building and maintaining network infrastructure – are rising sharply. Since 2022, network costs on the average annual household bill have increased by £129. Unaddressed, between 2026 and 2032 they will increase a further £108 (Ofgem 2025a).

This creates a significant political risk for government. Polling from Public First shows that energy bills remain the living cost that households worry about most, with a plurality (38 per cent) of people identifying them as their biggest financial concern – a problem they overwhelmingly believe is the government's responsibility to fix (65 per cent). Despite many years of underinvestment, more people hold the current government's policy decisions responsible (35 per cent) for the cost of living crisis than the previous one (28 per cent).

The government therefore faces a difficult balancing act. It must accelerate the buildout of a modern infrastructure while demonstrating that it is protecting households from unnecessary bill increases in future *and* delivering tangible benefits now. Failure to do so risks delaying essential infrastructure upgrades vital to electrification and exposing consumers to the continued volatility of global gas markets.

Government is not striking the right balance. Regulatory and market structures do not incentivise network companies to pursue value for money. Technologies that could reduce system costs – particularly flexibility solutions such as batteries or electric vehicles – face barriers that limit their deployment.

The government should prioritise solutions to this challenge that deliver visible and measurable benefits to households while improving the efficiency of the energy system.

INTRODUCE A CLAWBACK MECHANISM FOR EXCESS NETWORK COMPANY PROFITS

Under the current regulatory framework, network companies are projected to earn around **£5 billion in excess profits**. The government should introduce a clawback mechanism that returns these excess profits directly to consumers. This could be delivered as:

- **A rebate worth approximately £183 per household at the end of the RIIO-2 period**, in two stages. First in 2026 when electricity transmission, gas transmission and gas distribution investment periods end, and again in 2028 when the electricity distribution investment period ends.
- **A permanent mechanism** thereafter to return excess profits automatically at regular intervals during future regulatory periods.

INTRODUCE 'FREE CLEAN ELECTRICITY HOURS' DURING PERIODS OF SURPLUS RENEWABLE POWER

By shifting electricity demand to times when renewable generation is abundant, the system can avoid expensive grid upgrades and reduce balancing costs. However, current flexibility markets largely benefit households that can actively engage with time-of-use tariffs or invest in technologies such as home batteries or electric vehicles.

To make flexibility accessible to everyone, the government should follow Australia's example and introduce **free clean electricity hours** with the following features:

- During periods of surplus wind or solar generation, suppliers would offer **free electricity for a defined number of hours**. Illustrative analysis suggests households could save around £13 in 2026 and £18 in 2027 as the number of instances with surplus renewable electricity gradually increases over time.
- The scheme would be available to **any household with a smart meter**, regardless of tariff type.
- This would allow households to **run appliances, charge devices or heat water at zero cost**, delivering immediate and visible savings.

REDISTRIBUTE COST RECOVERY OF NETWORK INVESTMENTS

Ofgem has already shifted £14 of network costs on energy bills from the first two years of the price control, to be repaid later, saving households £11 in 2026/27. Ofgem should go further and continue to shift network costs from 2027/28 so that repayment of network costs is made when wholesale and system costs fall in future.

ENABLING RECOMMENDATIONS

Alongside these public-facing measures, technocratic fixes behind the scenes can ensure network investment delivers maximum value for consumers.

- **Reducing settlement periods from 30 minutes to 15 or 5 minutes** which would improve the business case for fast-responding assets like battery storage and help to defer more expensive network upgrades.
- **Expanding the National Energy System Operator's [NESO's] Local Constraint Markets** beyond the Scottish and English network boundary to enable flexible assets to compete in these markets against network upgrades.
- **Updating regulatory framework for flexible assets** to incentivise grid-friendly behaviour to recognise that these assets can both charge and discharge electricity to help manage constraints.
- **Making the smart meter rollout an opt-out scheme** to accelerate the number of households that could benefit in future from consumer-led flexibility services. This would also help suppliers meet Ofgem's new six-week delivery standards and reduce the likelihood of private landlords refusing smart meters when their tenants ask for them.
- **Shifting the 50/50 split between consumers and companies in the totex incentive to 90/10 in favour of households.** Even before any clawback mechanism triggers, this would ensure households are the main beneficiaries of networks delivering upgrades under budget.
- **Providing loan guarantees with strict standards to network companies** to help lower their cost of capital in return for improved performance (using existing Ofgem indicators).

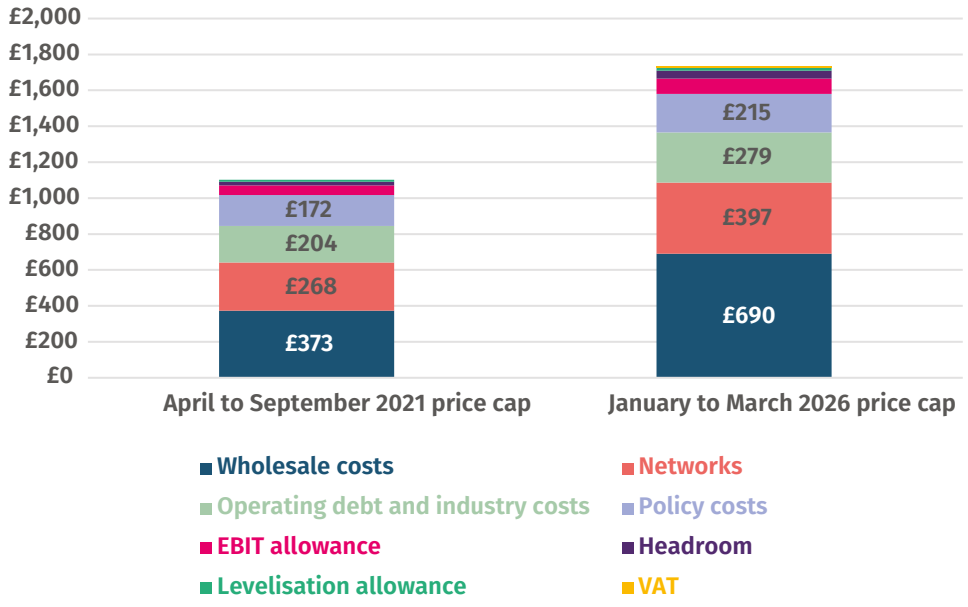
1. POLITICAL CONTEXT: WHY THE GOVERNMENT MUST FOCUS ON KEEPING NETWORK COSTS DOWN

A modern renewable-led grid looks very different from our current one. For homegrown energy to power our cars, homes and industries, it must be transported from the point of generation to where people want to use it. As people increasingly rely on modern electrified technologies, the volume that needs to be transported across the electricity grid will grow. Finally, because sunshine and wind cannot be switched on and off at will, a modern electricity system must be able to manage high output and low demand, and vice versa.

Transforming the electricity system is not cheap. It will require major investment in both new generation and grid upgrades to increase capacity including new pylons, cabling and substations. In addition, decades of underinvestment by successive Conservative governments deferred the cost of necessary upgrades onto future consumers. As a result, the UK now faces the dual challenge of expanding the grid to accommodate renewable generation while also replacing ageing infrastructure.

FIGURE 1.1: WHOLESALE COSTS SET BY GAS ARE THE BIGGEST CONTRIBUTOR TO RISING ENERGY BILLS, BUT NETWORK COSTS ARE THE NEXT LARGEST FACTOR

Comparison of components of April 2021 and January 2026 energy bills



Sources: Ofgem, 'Default tariff cap update for 1 April 2021' (Ofgem 2021); Ofgem, 'Changes to energy price cap between 1 April and 30 June 2026' (Ofgem 2026a) [adapted by IPPR]

Government must push ahead with this transformation; recent conflict in the Middle East has demonstrated once again the risk to British consumers of imported fossil fuels. However, policymakers cannot ask the public to accept higher costs for savings later down the line. Energy bills cause households the most financial stress out of all living costs (38 per cent of respondents) and the public overwhelmingly think it is the government's responsibility to tackle the cost of living (65 per cent) (Public First 2025). The government has begun taking action to bring energy bills down, with the chancellor announcing a £150 cut to energy bills in the autumn 2025 budget. This is an important step, but government risks this progress made on lowering bills being eaten away by rising infrastructure investment.

The 'network costs' component of the bill that funds upgrades is already contributing to rising energy bills. Comparing energy bills before the invasion of Ukraine to the present day, wholesale prices set by gas are still responsible for half of the £634 increase in the average annual household bill; but network costs also rose by £129 (figure 1.1). From 2026 to 2032, Ofgem estimates that the network cost portion of the energy bill will rise by a further £108.

1.1 FLEXIBILITY CAN LOWER COSTS

Flexibility is the ability to adjust energy use in response to external signals, such as grid congestion or periods of high renewable generation. By shifting demand to less busy times of the day, flexible assets including batteries, industrial processes and consumer technology such as electrical vehicles, can use variable wind and solar output more effectively within existing grid capacity.

Government recognises the potential for clean flexibility to keep household bills down. The Clean Flexibility Roadmap lays out the plan for a two- to threefold increase in flexible capacity to a range of 51–66GW by 2030 (DESNZ 2025a). Table 1.1 lays out the capacity targets for flexibility technologies set out by the government. Current deployment remains well below target levels, particularly for consumer-led flexibility and battery storage.

TABLE 1.1: THE RANGE OF FLEXIBILITY TECHNOLOGIES SET OUT IN THE GOVERNMENT'S CLEAN FLEXIBILITY ROADMAP

Flexibility technology	Description	Target capacity (GW)	Delivered capacity (GW)
Grid-scale battery storage	Batteries connected to transmission and distribution networks	23–27	6.8
Consumer-led flexibility	Voluntary shifting of electricity consumption away from peak times (eg smart charging of electric vehicles)	10–12	1.6
Interconnectors	Subsea cables connecting the GB energy market with neighbouring countries to enable cross-border energy trading	12–14	9.8
Long-duration electricity storage	Electricity storage that can provide electricity for a long time such as pumped hydro storage	4–6	2.8
Low-carbon dispatchable power	Power generation such as CCS or hydrogen to power that can back up the grid over a longer period of time	2–7	4.3

Source: DESNZ, *Clean flexibility roadmap* **(DESNZ 2025a) [adapted by IPPR]**

Putting consumers first in the grid transition will require more than simply connecting additional flexible capacity to the grid. Without action, there is a risk that flexibility is underused, that households are excluded from opportunities to reduce their bills, and that unnecessary costs continue to be added to energy bills.

In this report, we address three of those challenges to delivering for consumers in the grid transition:

1. market and regulatory barriers to system savings from a flexible system
2. consumer-facing barriers to the uptake of consumer-led flexibility
3. an opaque regulatory framework pushing up energy bills.

2. CHOOSING FLEX OVER BUILDOUT

By storing and releasing power at chosen times, a flexible system matches supply and demand more effectively within existing network capacity. While this will not make bills fall in absolute terms, households could avoid a total bill rise of £4,500 to 2050 when compared to a low-flex scenario (ESC 2025a). With less money spent on turning wind off and gas on and less on network or generation buildout, more can be left in consumers' pockets.

The political risks of allowing bills to be pushed up by constraint costs and unnecessary buildout are significant – negating efforts to lower bills taken elsewhere and feeding accusations of infrastructure overspend. However, the current system is holding back the commercial viability and delivery of flexibility. In this chapter we discuss three key challenges:

1. flexible assets not receiving the right signals to help the network minimise stress
2. a lack of clarity over flexibility's role in system planning
3. regulations miscategorising flexible assets at the transmission level.

2.1 THE IMPORTANCE OF RECEIVING THE RIGHT SIGNALS FOR FLEXIBILITY

Most of the expected savings from flexibility come from grid-scale batteries and consumer-led flexibility including home heating, supermarkets, factories, and electric vehicles adjusting their energy output (Energy Systems Nexus 2026). While grid-scale batteries provide flexibility by storing electricity when prices are low and discharging it during periods of high demand, consumer-led flexibility operates through demand shifting, where consumers adjust use in response to price signals or grid stress.

To support the system, these assets have to be in the right place at the right time (Falú and Shelton 2026). Ensuring that flexible assets have visibility of where and when network capacity is constrained – and are rewarded for responding – is essential if flex is to substitute for reinforcement (Gill et al 2025). Without those signals, flexibility could worsen grid stress, for example by discharging during peak hours.

The location of assets is important because technologies such as solar panels or batteries are the most effective at managing congestion when they are (1) electrically close, and (2) able to absorb surplus power before it flows into constrained areas (Shafiekhani and Qadrdan 2025).

2.1.1 Improving temporal price signals

When it comes to relieving grid stress, timing matters. Yet current prices do not reflect when grid capacity is tight.

Electricity in Britain is traded in 30-minute packets known as 'settlement periods', a structure designed when output from thermal plants was relatively predictable over half-hour intervals. Our modern electricity mix is more variable, and supply is

determined by wind and sunlight. Scarcity events often are shorter, more localised and less predictable.

Fast-ramping battery technologies are a natural counterpart to variability, but only if they receive granular information about congestion or scarcity (Mentens et al 2025). In a 30-minute settlement system, spikes *within* that half hour are not reflected in wholesale market prices. Flexible assets like batteries could smooth out these spikes but they are currently only procured for one activity – charging or discharging – in a half-hour period.

Government is considering shortening the period over which energy is bought and sold from 30 minutes to 15 or even 5 minutes (DESNZ 2025b). Shorter settlement periods would strengthen the commercial case for batteries to compete in scarcity periods, improve competition with gas generation and incentivise batteries to work in favour of system stress (ESC 2025b). Greater granularity could also improve forecasting and shift more trading into day-ahead and intra-day markets, reducing reliance on expensive balancing actions (DESNZ 2023a).

2.1.2 The loss of locational (zonal) pricing

Zonal pricing would have used market signals from local supply, demand and grid conditions to drive wholesale prices. Zonal pricing was rejected by government as it did not want to risk raising the cost of capital for renewables or create a postcode lottery. However, flexible assets were the principal losers. Information that shows where congestion on the grid is, and makes it profitable to relieve that congestion, is key for batteries to operate successfully. There is a clear risk that profitability becomes divorced from what minimises grid stress, and assets may respond to national price signals that worsen grid strain near where they are operating.

Without these locational signals, the government has opted to take a more interventionist approach to the energy system, promising "a more coordinated and strategically planned electricity system" – in keeping with the state-led buildout for Clean Power 2030. However, if system flexibility savings are to be felt in people's pockets, government must use regulatory incentives to correct for a lack of market signals to ensure that the profitable option for flexible assets is the one that is best for the energy system.

2.2 A LACK OF CLARITY OVER FLEXIBILITY'S ROLE IN STRATEGIC PLANNING

At the centre of the government's plan for a more coordinated and centrally planned system is the National Energy System Operator's (NESO's) Strategic Spatial Energy Plan (SSEP). The SSEP will substitute for market-based signals – embedding location as a consideration in planning by identifying the optimal siting of generation, storage and network investment. The plan will act as a guide for investors but also shape the proposed Centralised Spatial Network Plan (CSNP), which will become the main mechanism for assessing transmission constraints and shaping plans for investment. The SSEP is therefore crucial in ensuring flexibility is explicitly substituted for additional generation and network.

While flexibility is reflected in overall capacity scenarios in the SSEP methodology, it is not yet clear that it evaluates flexibility as a *substitute* for additional pylons and cables. The proposed CSNP also does not outline how flexibility options will be considered in economic efficiency calculations (ESC 2025b). The government has promised to integrate modelling of flex in future iterations of the SSEP (NESO 2025a). However, the first iteration of the SSEP – which has already been delayed – is not expected under August 2027, and it is intended as a long-term strategic framework to 2050. It is crucial that this

planning framework, which will feed into multiple future iterations of the CSNP, explicitly evaluates flexibility as an alternative.

BOX 2.1 AUSTRALIA: FLEX AND BUILDOUT PLANNING CO-OPTIMISATION

Australia's approach to system modelling identifies where flexibility can defer or reduce the need for specific network reinforcement as part of the planning process for upgrades. The modelling operates at a strategic, zonal level, much like the proposed Strategic Spatial Energy Plan; however, it explicitly evaluates transmission expansion against flexibility options, rather than just seeing flexibility as increasing system-wide capacity.

2.3 REGULATIONS MISCATEGORISE FLEXIBLE ASSETS AT THE TRANSMISSION LEVEL

For the government to successfully deliver a low-cost balance of generation, network buildout and storage, it must address how the regulatory framework treats flexible assets and incentivises grid-friendly behaviour.

Transmission Network Use of System (TNUoS) are currently the main regulatory tool with a locational element capable of guiding siting of assets. Charges are applied to generation assets at the transmission level to recover costs for using the network. They are technology neutral, but vary according to the distance from demand centres, peak demand costs, and network connectivity of a specific area. This makes siting more expensive for generators in areas where the network is under pressure. For example, in 2025, a generator in northern Scotland would pay around £26/kW/year due to the concentration of generation in the area and distance from demand centres, while generators in southern England received money at -4/kW/year (Scottish Renewables 2025).

Ofgem treats transmission-connected batteries as generation when charging TNUoS due to the strain they put on the grid when discharging. However, this approach fails to reflect the fundamentally different operating profile of storage compared to generation. Batteries both import and export electricity depending on system conditions, and when co-located with renewable generation they can absorb excess power and reduce congestion. The current system doesn't recognise batteries' ability to import power, making it more expensive for storage to locate where it has the most system benefit – a clear example of regulatory misalignment with government's flex goals.

Similarly, under current government rules for connecting flexibility to the grid, the network must be able to accommodate a new asset operating at full export capacity at times of minimum demand (National Grid 2025). This risk aversion is appropriate for inflexible generators; however, it fails to consider the ability of batteries to ease, rather than worsen, system stress if given the right regulatory incentives (Verhagen et al 2026).

Despite the potential for flexible assets to operate in grid-friendly ways, this is not guaranteed. As discussed previously, batteries can exert pressure on the grid in response to price signals and worsen grid stress, a risk increased under national pricing. However, government has regulatory tools at its disposal that can encourage or even ensure that batteries only operate at times, and in ways, that are grid friendly.

Several countries are already using regulatory tools to encourage grid-friendly behaviour from battery operators. Below are two examples illustrating the range of possible approaches.

BOX 2.2 NETHERLANDS: NON-FIRM ACCESS RIGHTS FOR GRID-SCALE BATTERIES

Non-firm agreements are a contract-type which only allow connected parties to access the grid at the Energy System Operator's (ESO's) permission. In 2024, severe congestion on the transmission network in the Netherlands led the regulator and system operator (TenneT) to introduce non-firm access arrangements for grid-scale battery operators in defined congested areas. These new contracts involve battery operators accepting operational restrictions which can be used by the ESO to tackle peak congestion in return for lower grid-tariff costs. TenneT has created a range of non-firm products:

1. **Time-based transmission right** allows full grid access for 85 per cent of total hours in a year. The remaining 15 per cent can be used by the grid operator at its discretion with a day's notice.
2. **Time block-based transmission right** entitles asset to connection in off-peak time blocks agreed with the network operator.

This change made over 9GW of transmission capacity available on a flexible basis, as well as reducing congestion and avoiding emergency reinforcement (TenneT 2025). This method of expanding grid capacity without risking system security has been supported by the International Energy Agency as an innovative way to use flexibility to manage grid congestion (IEA 2025) and is already utilised at a distribution level in the UK, but the predictability of constraints in the UK make it an attractive option at the transmission level (DESNZ 2023a).

At a distribution level, UK networks have long used non-firm access arrangements, allowing quicker connection to the network under operational constraints (Monterde et al 2025). Similar approaches have not yet been embedded at transmission level, where congestion pressures are most acute. Distribute network operator [DNO] non-firm connections have also been used primarily as a stop-gap measure until reinforcement occurs. For flexibility savings to be actualised, the use of non-firm access arrangements would have to be considered a serious substitute.

BOX 2.3 TURPE: LOCATIONAL GRID FEE REDUCTION FOR PEAK-CHARGING BATTERIES

From August 2026, the French regulator CRE will implement a new locational grid tariff which rewards batteries for network-friendly behaviour.

Under this new system, battery operators that opt in will accept predefined operating windows depending on grid conditions. CRE identified areas of the network where storage could provide the greatest benefit and created a specific tariff component for batteries located in those zones. These seasonal tariffs are optional and annual, and the regions of stress or shortfall are determined by the regulator as "injection" or "consumption" points which are fixed for five years, giving investors a clear horizon to calculate upside (Modo Energy 2025).

These new tariffs go beyond using tariffs to incentivise where batteries should site, to incentivise *when* they should charge and discharge and promote peak-shifting capacity.

2.4 HOW TO SPREAD THE COSTS OF THE BUILD-OUT THAT IS NECESSARY

While flexibility can reduce the need for additional network and generation build-out over time, it does not remove the need for substantial upfront investment, particularly in the transmission grid. This core expansion is a prerequisite for a renewables-based system and is expected to deliver significant system-wide savings in the 2030s – Ofgem estimates around £6 billion per year by 2030 from new grid infrastructure (Ofgem 2025a).

The burden of paying for the transmission infrastructure falls primarily on current consumers, even though the benefits of both system savings, and the economic growth that comes from new infrastructure are in the future. However, the balance between what current and future consumers pay is, to a degree, a policy choice. There are two key mechanisms through which cost recovery is determined.

1. The cost of any individual asset is recovered over a 45-year period using straight-line depreciation meaning the highest repayments fall at the beginning and reduce evenly over time.
2. This feeds into the price control (RIIO), which sets the total revenue a network company is allowed to recover from consumers across five years including the costs of new assets, legacy assets and regulated revenue.

The current investment cycle is genuinely exceptional. The standard argument against deferral is that future consumers should not pay for assets that they will not be the main beneficiaries of. But this argument is weaker in a time of extraordinary investment to transition the energy system – and because of the nature of the benefits. Reduced impacts of climate, the economic stimulus of new productive infrastructure (particularly on a 45-year horizon) and the system savings are all felt more in the future than the present. There is a clear case of intergenerational fairness for spreading costs.

Ofgem has already shown willingness to intervene. For the current price control period (RIIO-3), Ofgem has introduced a 'smoothing' mechanism – deferring £14 of revenue away from the first two years of the price control and recovering it in the last two, with £2 of interest added to reflect the time value of money. This was done out of concern for the size of the step change between RIIO-2 and RIIO-3 and establishes a clear precedent.

There are three broad levers for government to go further:

- Extend intra-period revenue profiling within RIIO-ET3. This is the most easily implementable change with clear precedent. This could also be considered for the upcoming ED3.
- Extend the 45-year regulatory asset life. A longer depreciation period would spread costs more thinly and reduce near-term bills structurally. However, 45 years already sits at the longer end of international comparisons.
- Restructure the shape of depreciation. Rather than recovering an equally declining amount each year, changing the gradient of cost recovery. This would mean recovering relatively less in the early years and more later when system costs are projected to fall.

3. NOT ALL HOUSEHOLDS CAN ACCESS CONSUMER-LED FLEXIBILITY THAT COULD SAVE THEM MONEY

Without addressing market barriers, the government will also be unable to promote consumer-led flexibility (CLF).

CLF technologies incentivise households to save electricity in off-peak times and/or pay them directly to manage their electricity demand (DESNZ 2025a). There are many different types, summarised in table 3.1. CLF is the government's main retail offer for upgrading the grid because it can help households to reduce their energy bills directly.

TABLE 3.1: THERE ARE DIFFERENT CONSUMER-LED TECHNOLOGIES THAT GIVE HOUSEHOLDS A RANGE OF SAVINGS

CLF option	Estimated saving	Technologies required
Time of Use (ToU) tariffs	Shifting electricity use away from peak times could save over £200 per year	Smart meter (with at least half-hourly readings)
Vehicle to grid charging	Smart charging overnight could save around £330 per year	Electric vehicle with V2G-capable charger, smart meter and compatible tariff
Heating management	Using heat flexibly with a ToU tariff could save £250 per year	Heat pump with smart control, smart meter, ToU tariff
Electrical appliance demand management	Shifting small loads like washing machines or dishwashers from peak times could save up to £38 per year	Smart appliances, smart meter, smart tariff

Source: DESNZ, *Clean flexibility roadmap* (DESNZ 2025a) [adapted by IPPR]

However, the government will need to address several barriers to household uptake. 69 per cent of households are at risk of being 'locked out' of the benefits of consumer-led flexibility (Chard 2025) due to four primary challenges:

1. low awareness and familiarity
2. high upfront costs of low-carbon technologies that offer CLF
3. inflexible energy consumption patterns for some households
4. a slow smart meter rollout.

3.1 GOVERNMENT NEEDS TO CONTINUE TO DRIVE UP AWARENESS

Household awareness and take up of CLF remains low with a recent survey finding that only 11 per cent of households are currently on a time-of-use tariff, 41 per cent were unlikely to switch to one, and 78 per cent said they had never heard of demand-side response programmes (MCS Foundation 2025).

Low awareness does not mean low interest. The same survey found that 48 per cent of survey respondents would be likely to participate in CLF once they understood what it involved (ibid). The government's Clean Flexibility Roadmap explicitly acknowledges low awareness, trust and understanding as major challenges and it has committed to addressing consumer engagement in future (DESNZ 2025a). It is now trialling a CrowdFlex scheme of around 100,000 people which provides automated peak shifting. This trial has led to households shifting around 30 per cent of the electricity to non-peak time with generally positive feedback from the trial (ibid).

3.2 DESPITE POLICY SUPPORT, MILLIONS OF HOMES WILL MISS OUT ON THE OPPORTUNITY TO ENGAGE WITH CLF DUE TO HIGH UPFRONT COSTS

The Warm Homes Plan commits to a £15 billion increase in funding for up to five million households to install clean technologies by 2030. For low-income homes in particular, the government estimates that funding insulation, heat pumps and solar panels could reduce bills by up to £850 (EST 2026), even before considering the benefit from incentives to manage electricity consumption (table 3.1) (DESNZ 2026a).

However, problems with affordability remain: there are many consultations scheduled before funding is released (DESNZ 2026a) – in the meantime, many households will still be left behind.

3.3 PEOPLE'S DAILY ROUTINES MAY LIMIT HOW THEY BENEFIT FROM CLF

One of the potential barriers to engaging with consumer-led flexibility is the *personal* flexibility of individual households, with certain groups at risk of missing out or even paying more (Chard 2025). This is because Time-of-Use tariffs are not covered by the current energy price cap and can therefore charge above cap prices at peak times, exactly when those with more rigid energy consumption patterns may need it.

For example, a household of two working adults without dependents who have flexible working hours and can work from home could have very flexible daily electricity consumption patterns. By contrast, a family of four with young children, and two working adults who don't work from home may have much more regimented daily electricity consumption patterns that could be difficult to shift. In the worst-case scenario a time of use tariff could potentially increase their energy bills.

3.4 A SLOW SMART METER ROLLOUT EXCLUDES HOUSEHOLDS FROM CLF

A smart meter is important for many CLF products and offers because they record electricity consumption data and verify to suppliers when households have shifted this consumption.

The UK's smart meter rollout has been slow and expensive compared to others. France has delivered more than 90 per cent rollout of smart meters to households at a cost of around 5 billion euros (CSA 2025; Selectra 2023). The UK has 68 per cent coverage and final costs could reach £20 billion (PAC 2023).

The reason for slow rollout is that smart meter installations are supplier-led and voluntary, unlike almost every other European country where a mandatory rollout has been delivered by distributed networks (EC 2019; PAC 2023). A voluntary approach allows households to refuse a smart meter. This is a particular issue in the private rented sector where landlords can refuse smart meters on behalf of tenants. Only half of homes in the private rented sector have smart meters, the lowest proportion among all housing tenures (MHCLG 2026).

Being supplier-led has created other complications. It has led to a slow and complex rollout of data gathering, with some smart meters ceasing to operate when customers switch suppliers (NAO 2023).

4. THE REGULATORY PROCESS LEADS TO HIGHER ENERGY BILLS

Even if the government addresses all market and consumer barriers to grid flexibility, the regulatory framework that guides network investment still leads to higher-than-necessary energy bills. It is critical that the current process is fixed (see box 4.1) to ensure the public knows the government is fighting for their interests.

BOX 4.1 HOW OFGEM REGULATES NETWORK COMPANIES

Investment is the responsibility of network companies, which operate as regional monopolies regulated by Ofgem. To ensure they are delivering value for money to households, Ofgem negotiates with network companies and updates the rules, budgets and allowable profits within regulatory frameworks known as RIIO-1, RIIO-2 (the framework for the current investment period), and RIIO-3 (which will begin from this year until 2032).

In this chapter, we discuss three key challenges facing the current regulatory process:

1. regulatory incentives that lead to network companies overstating costs and underdelivering investment
2. a lack of transparency that undermines confidence in value for money
3. network companies finding loopholes to make excessive profits.

4.1 REGULATORY INCENTIVES FOR NETWORK COMPANIES ARE BAD FOR HOUSEHOLDS

The current framework that regulates network companies incentivises them to overstate their costs and underinvest (Common Wealth 2025). Section 4.1.1 sets out how the regulation drives this underinvestment and why households are now suffering higher energy bills as a result.

4.1.1 How the totex mechanism incentivises underinvestment

The 'totex mechanism' sets allowances for total expenditure (totex) – the sum of a company's capital expenditure (capex) on new network upgrades and operational expenditure (opex) on maintaining existing assets.

The theory behind a totex allowance is that focusing on total expenditure enables network companies to decide the most cost-effective way to achieve performance objectives, whether putting capital into new upgrades or managing operations more efficiently. This creates an incentive for developers to deliver investments more cheaply than their agreed budgets. If they deliver under budget, roughly half

of the savings are returned to households and network companies are allowed to keep the other half (Ofgem 2025b).

Under the instruction of previous governments, Ofgem issued steers to network companies to focus more on flexible assets and maintenance and avoid network reinforcement (Wangmo 2025). In theory, this was the right approach; however, network companies used this guidance to overstate their costs and underinvest, maximising their windfall.

In 2020, the National Audit Office found that network company budgets had been set too high and performance targets had been set too low for the RIIO-1 investment period between 2013 and 2023 (NAO 2020). While RIIO-2 saw Ofgem set stricter budgets for investment, network companies have still been accused of underdelivering (Common Wealth 2025). This includes Ofgem recently placing the National Grid under special monitoring with some suggesting that the recent fire at the Heathrow substation was a consequence of underinvestment (Millard 2025). Ofgem's latest findings for electricity distribution network performance found that 4 out of 14 DNOs are missing their targets for customer interruptions to supply and 10 out of 14 are missing their targets for the average duration of interruptions (Ofgem 2026b).

The consequence of this underinvestment is that households today are paying more. Ofgem estimates that out of a projected total increase of £108, decisions made in RIIO-3 will lead to bills being £79 higher than if they had just continued with the framework set out under RIIO-2. This cost is largely split between investment into electricity and gas networks that corrects for previous years of underinvestment (£31) and a higher cost of capital (£32) that comes from global uncertainty paired with high capital requirements (Ofgem 2025a).

4.2 LACK OF TRANSPARENCY AND SCRUTINY IN NEGOTIATIONS

A lack of transparency and scrutiny makes it harder to ensure that network companies' investments are delivering value for money for households. This is partly due to commercial sensitivities around publishing cost data (National Grid 2024). Ofgem has visibility of this data but other organisations do not, limiting scrutiny. However, between RIIO-1 and RIIO-2, Ofgem's monitoring and evaluation has become more opaque, not less (Citizens Advice 2025), even despite previous criticisms about a lack of transparency by the National Audit Office (NAO 2020).

When network companies submit their business plans to Ofgem, on top of their stated totex requirements they can choose to apply a kind of performance-related benefit known as the 'enduring value adjustment' (EVA) to any investments. EVAs are based on the future value that upgrades may bring to households or businesses, such as facilitating growth in electric vehicles by enabling faster charging point connections. Network companies add these adjustments into their overall investment budgets; but payments only begin once the upgrades start to prove their worth and can be reduced if they do not.

While Ofgem will scrutinise companies' justifications for adding EVAs, it does not have a clear process to track and monitor the performance of these upgrades, meaning households may not be seeing value for money. In addition, the lack of scrutiny increases the risk of network companies applying EVAs to the same activity across different RIIO periods and therefore being paid twice (Citizens Advice 2025).

Importantly, EVAs are subtracted from initial calculations for underspending, meaning that Ofgem's lack of monitoring may also result in households benefiting less from the mechanism to share the benefits of underspending. In the first three years of RIIO-2, network companies had a gross underspend of around £3.5 billion

but a net underspend of only £1.4 billion after network companies applied around £2.1 billion of EVAs.

4.3 EXPLOITING LOOPHOLES TO GENERATE EXCESSIVE PROFITS

Research from Citizens Advice suggests that in the RIIO-1 investment period, network operators made a windfall of over £7.5 billion. In the current RIIO-2 period due to end in 2028, analysis from Citizens Advice (2025) suggests network operators have already made a windfall of £4 billion. Stakeholders we spoke to for this research suggested this could reach £5 billion by 2028. In household terms, these windfalls in RIIO-2 will lead to the average annual household bill being around £183 higher than it should be over the coming decades.

In both RIIO periods, the common thread was the information asymmetry between network companies' reported costs and Ofgem's estimates of what their costs should be. This has manifested in various ways, ranging from overestimating companies' cost of capital in RIIO-1, to failing to model future inflation expectations properly in RIIO-2. Consequently, even with recent increases in capacity at Ofgem, the regulator invariably finds itself trying to fight the last battle in the next investment period. Given the massive scale of investment required in RIIO-3, failures to address any new loopholes in allowable returns could correspond to even higher excess profits than in previous investment periods.

5. HOW TO KEEP BILLS DOWN

It is essential the government demonstrates to the public that keeping energy bills down is its central focus while still building an energy system fit for a modern economy. Table 5.1 below summarises the package of recommendations and the corresponding challenges which this report highlights. From this package, we highlight and discuss two core recommendations that offer the most salient, public-facing proof points.

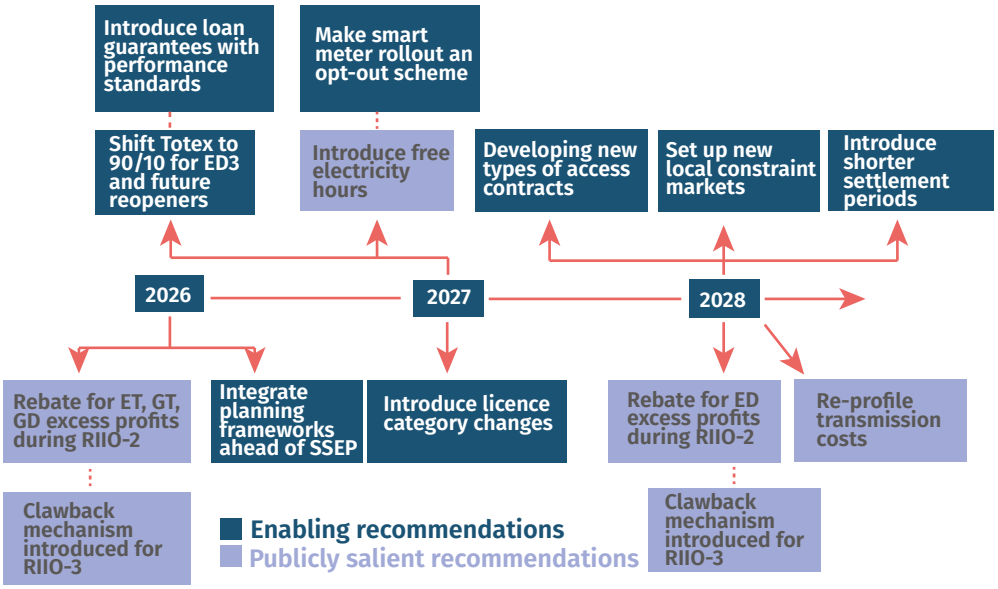
TABLE 5.1: SUMMARY OF RECOMMENDATIONS

Challenge	Recommendation	Responsibility for implementation
Procuring cost-effective flexibility over buildout	Integrate flexibility into planning frameworks	DESNZ; Ofgem; NESO
	Shorten settlement period to 15 minutes	
	Scale up Local Constraint Market beyond B6 boundary	
	Offer network charging discounts to flexible assets for grid-friendly behaviour	
	Reprofile transmission investment to shift the burden off current consumers	Ofgem
Improving access to consumer-led flexibility	Free clean-electricity hours for every household with a smart meter	DESNZ; NESO; Ofgem; energy suppliers
	Make smart meter rollout an opt-out scheme	DESNZ; Ofgem
Ensuring regulatory framework keeps bills down	Clawback excessive network company profits	DESNZ; Ofgem
	Shift 50/50 totex to 90/10 in favour of consumers	DESNZ; Ofgem
	Offer conditional loan guarantees to lower cost of capital	DESNZ; National Wealth Fund (NWF)
	Require network operators to publish detailed constraint maps	DESNZ; Ofgem

Source: Authors' analysis

Figure 5.1 also sets out a timeline to show the speed and sequencing which the government should follow to introduce these policy changes.

FIGURE 5.1: TIMELINE FOR IMPLEMENTING POLICY RECOMMENDATIONS



Source: Authors' analysis

5.1 PUBLIC-FACING RECOMMENDATIONS

The public wants government to fix ever rising energy bills. Action should be visible and have a tangible, swift impact.

5.1.1 Clawback excessive profits made by network operators

There will always be information asymmetry between Ofgem and network companies. Rather than further complicating regulation and negotiations, it would be simpler to develop a clawback mechanism that activates after negotiations have concluded. Introducing clawbacks only on excess profit above regulated margins should leave cost of capital unaffected. If it did change underlying costs, that would mean network companies are pricing their ability to exploit loopholes into their financial planning.

A clawback should be introduced as soon as possible as a rebate to households at the end of the RIIO-2 period in 2026 when electricity transmission, gas transmission and gas distribution investment periods end, and again in 2028 when the electricity distribution investment period ends. This would involve clawing back the estimated £5 billion in excess profits that will be made by the end of the period to return approximately £183 per household. In practice, the excess returns relate to an increase in asset value rather than pure profit, meaning that some network companies could not provide rebates to customers immediately, depending on their cashflow position.

Ofgem should trigger the clawback mechanism at regular intervals after it has confirmed final investment plans for RIIO-3. Ofgem already includes 're-openers' within each investment period – opportunities for both Ofgem and network companies to reevaluate plans. Ofgem should include clawbacks whenever it 're-opens' negotiations with network companies to scrutinise profits. Where excess profits were found, network operators would immediately rebate these to households – since network costs are socialised, the rebate would also be socialised to all households.

This process could help to create a publicly salient moment in every year with a re-opener. Government and Ofgem could use this moment to announce that network operators are being instructed to return money directly to households via energy bills.

5.1.2 Introduce free clean electricity hours for every household with a smart meter

As not all households can engage with consumer-led flexibility options, the government should introduce offers that will be more accessible. Following Australia's example (Stock 2025), the government should require suppliers to offer free electricity hours when wholesale prices are negative that would be available to any household with a smart meter.

By being free and accessible to every household, this offer could not only raise the awareness of, and familiarity with, consumer-led flexibility but also establish a link between windy days and cheap electricity that would only grow in future as more renewables come onto the grid.

While the UK is not sunny enough to offer a regular block of free electricity hours like Australia, NESO could monitor and indicate when it was likely to experience negative wholesale prices, likely caused by surplus wind, and notify all suppliers. The suppliers would then be required to text, email or call all customers with a smart meter. This process could be set up relatively quickly as it shares the same principle with NESO's Demand Flexibility Service which was set up and functioning within months. With additional consultation between Ofgem and energy suppliers, this policy offer could be implemented within a year.

As a worked example, it is estimated that there will be 306 hours of negative wholesale prices in the UK in 2026 an increase on 149 hours in the previous year (Farhat 2026). For the sake of illustration, if these negative priced hours were distributed evenly across the year and then adjusted so that windier months (eg January) (DESNZ 2026b) have a higher share of these hours, households[1] could save around £13. With negative priced hours predicted to increase to around 430 in 2027, this annual saving would increase to around £18.

<list>Importantly, we recommend that this offer should be time limited while other reforms are implemented to make the grid more flexible and policy packages are introduced to incentivise greater participation in other forms of consumer-led flexibility. This is because raising the salience of flexibility has some important trade-offs which the government would need to consider. We suggest some key issues and how government could mitigate against them below. The government could mandate the provision of free electricity hours but allow suppliers to develop solutions to these issues themselves.

1. Introducing free electricity hours could blunt the competitiveness of energy suppliers that are already offering ToU tariffs. Effectively free electricity hours would force suppliers to offer a kind of 'entry-level' government mandated ToU tariff where all households can benefit from these hours regardless of their existing tariff. However, this would not prohibit suppliers from providing ToU tariffs with prices that varied at other non-negative times throughout the day.
2. There have been some concerns raised in Australia that suppliers are increasing ToU tariffs in non-free electricity hours to recoup lost revenue during free hours. This could end up having a disproportionate impact on households with inflexible electricity consumption patterns, particularly households on low incomes. To address this, government could work with suppliers to introduce limits, such as a 'fair use' limit on how much electricity each household could have for free in these periods to limit revenue losses

1 For this illustration, we have used daily electricity consumption from 'profile 1' of Nesta's archetypes, representing 25 per cent of the population. See: https://energy-use-profiles-explorer.dap-tools.uk/

for suppliers. In addition, while suppliers may lose revenue in these periods, household participation would also provide them with useful data that could provide suppliers with a customer base that was happy to participate in future demand-side management services.

3. Increased interest in participating in free electricity hours could actually increase demand to the point that prices are no longer negative, therefore reducing the potential number of hours where electricity is free. However, even at reduced frequency, free electricity hours could increase the attraction of ToU to households, at which point they would benefit from peak shifting, even when prices were not negative.
4. NESO would also need to be careful about when it forecasts that prices would be negative – implementation may need to be a two-step process where NESO and suppliers gauge initial interest from households and then adjust how many hours they expect to be free based on increased demand.
5. To maximise the potential for free electricity hours to be a national offer, the recommendations we set in section 5.2 are critical to ensuring that local network constraints do not limit the number of hours when prices could be negative.

5.1.3 Reprofile cost recovery of transmission investment to reduce the burden on current consumers

Government and Ofgem should examine whether the existing RIIO-ET3 revenue reprofiling can be extended. Ofgem has already deferred £14 of revenue from the first two years of the price control, saving households £11 in 2026/27.

Shifting more costs from 2027/28, where currently only £3 has been shifted, to when wholesale and system costs are projected to fall, would increase benefits to households. There is a risk that further deferring costs to later in the window would raise the cost of capital more significantly than the minor reprofiling that Ofgem has already done.

The more significant intervention would be to stretch the asset life or restructure the shape of asset depreciation itself by recovering less in the early years of a new asset's life and more after 2030. Unlike intra-period profiling, this would address the structural root of the problem rather than smooth around it. Government should task Ofgem with developing a proposal for how a restructured depreciation profile could work in practice, including what the revised recovery gradient would look like, the trade-off with network companies' cost of capital, and what safeguards would be needed to ensure that the deferral is timebound.

5.2 ACTIVELY CONSIDER COST-EFFECTIVE FLEXIBILITY OVER BUILDOUT

Minimising constraint payments and the costs of network and generation buildout will be essential to ensuring action taken to subsidise bills elsewhere is felt by consumers.

5.2.1 Require flexibility to be explicitly co-optimised with buildout in planning

The Department for Energy Security and Net Zero (DESNZ) should publish guidance for how flexibility should be considered in strategic planning frameworks for generation and network buildout to ensure consumers only pay for infrastructure that is genuinely needed. At present, key elements of the electricity system are planned through separate processes: generation is procured through a Contracts for Difference (CfD) auction, transmission investment is determined through the CSNP, and flexibility is mostly delivered through the market. This fragmented approach risks locking in infrastructure-first pathways that may not minimise total system costs.

Ofgem and NESO should actively consider flexibility in the SSEP and CSNP as an alternative, and factor in its operational potential to resolve acute grid stress rather than just its ability to increase grid capacity. This could look like identifying the lowest-cost mix of generation, storage and network investment as is done in Australia's integrated system plan (ISP) (AEMO 2026). Given the timeline for full SSEP publication, interim guidance should ensure that flexibility alternatives are considered in current transmission decisions. Waiting until strategic plans are finalised risks locking in infrastructure-first pathways at cost to the consumer.

5.2.2 Reduce the settlement period from 30 minutes to 15 or 5 minutes

DESNZ and Ofgem should push ahead with shortening settlement periods to 15 or 5 minutes. This would sharpen scarcity pricing, allowing fast-ramping assets to respond to intra-half-hour spikes, and prevent batteries being locked into 30-minute discharge commitments that blunt their benefits. Built environment consultancy Arup suggests that under shorter settlement periods of both lengths, revenue of flexible assets improves (see DESNZ 2023).

Shortening settlement periods will reduce balancing and constraint costs, saving consumers money year on year. A study of 5-minute settlement in Australia has also suggested that shortening settlement would put downward pressure on the wholesale price (Csereklyei and Khezr 2024). Arup's research estimates one-off transition costs at roughly £800 million for 15-minute, and £1.16 billion for 5-minute, so Ofgem should carefully consider the cost–benefit of each interval size. While these costs would ultimately reach consumers, they would originally be paid through the Balancing and Settlement Code charges paid by suppliers. Moving to a 15-minute period would also bring the UK in line with EU countries, benefiting energy trading as we link UK/EU electricity markets.

Delivering shorter settlement could happen quickly. The Balancing and Settlement Code would need to be amended and then metering and data storage mechanisms to be updated to manage a greater volume of settlement intervals. However, this reform must be carefully sequenced to build on the UK's transition to Market-wide Half-Hourly Settlement (MHHS) and use the fact that large-scale real data handling is now being integrated across suppliers and government systems.

5.2.3 Scale up flexibility procurement at a transmission level

Government should scale up procurement of flexibility services from batteries, businesses and consumers to manage congestion both ahead of time and in near-real time. This could be an alternative to the expensive balancing mechanism, reducing costs for consumers. it would provide a revenue stream which incentivises flexible assets to site in congested areas where their benefit to reducing system costs is the greatest.

UK network companies are already leaders in procuring flexibility at a distribution level to manage constraints, tendering for long-term and day-ahead capacity (DESNZ 2025a). However, these markets are far less common at a transmission level. The exception is that NESO has been operating a Local Constraint Market (LCM) on the UK's most constrained network boundary where electricity flows between the Scottish and English networks. Since April 2023, NESO has been defining need for flexible capacity and procuring day-ahead and intra-day constraint management from businesses and consumers to soak up excess supply at peak times (NESO 2025b). There is significant potential for this type of constraint management market model to be scaled up to operate more systematically across other constrained areas, and expand the types of products offered, for example across different time horizons (Gill 2024).

This would require action by Ofgem to allow NESO to expand the existing LCM pathfinder, including defining flexibility products, the cost recovery mechanism,

and establishing coordination rules with flexibility markets already being run by DNOs. More detailed constraint mapping and forecasting would also be required for NESO to cost-effectively procure flexible capacity and to ensure coordination with DNOs. NESO already calculates expected boundary flows and projected congestion costs as part of the Network Options Assessment (NOA, soon to be CSNP) process which feeds into transmission investment allocation. This analysis could feed into shared mapping with DNOs which could be published as the basis for procurement.

The Dutch platform for congestion solutions (GOPACS) is a positive model of TSO–DNO cooperation in congestion management. DNOs and TSOs coordinate flexibility procurement on a central management platform which connects grid operators with market participants, matching flexible capacity offers to stated congestion hotspots. Congestion management mechanisms include real-time dispatch and day-ahead contracts to limit use at peak times.

Constraint management markets are not a zero-cost solution, and trade-offs remain. This is where the cost-calculation of flexibility as an alternative to transmission planning is important. Part of this is to ensure that clear rules governing the interaction between constraint markets and the Balancing Mechanism exist to ensure that procured flexibility genuinely substitutes for high-cost balancing actions rather than creating additional payments (Gill 2024).

5.2.4 Incentivise grid-friendly behaviour by reforming regulatory incentives

Change the regulatory categorisation of flexible assets

Government should change the regulatory treatment of flexibility, both as part of TNUoS and the connections assessment process. By placing batteries in the same category as conventional generation, the current system creates perverse incentives, failing to encourage co-location and reducing the bankability of battery projects waiting in the connections queue. Government should introduce a regulatory category that reflects the dual role of storage assets and considers other types of flexible assets as part of this approach. This category could be connected to differentiated charging or early connection for flexible assets agreeing to act in grid friendly ways.

The government has already committed to reforming TNUoS to move beyond pure cost recovery and towards clearer, more stable incentives aligned with the SSEP. This includes a "review of charges for storage and demand" and creating incentives for locating closer to generation to reduce the need for further grid upgrades (Ofgem 2025c). Government should instruct Ofgem to bring forward the 2029 deadline for reform to reflect the urgency of providing locational signals to minimise costs to consumers.

Define grid-friendly products for engaging with the grid

Option 1: Conditional access rights

Conditional access rights allow batteries to connect to the grid quickly in exchange for accepting occasional curtailment during periods of congestion. Government and Ofgem should require transmission owners in congested areas to offer flexible access products. This type of agreement – like in the Netherlands – would allow curtailment during periods of congestion based on transmission constraint forecasts.

While these flexible products could be designed in various ways, a time-based option which allows operators to be constrained by NESO 10 to 20 per cent of the time without defining specific times would likely be the best suited to the variability of wind generation in the UK.

The key policy question is whether such contracts remain commercially viable. Evidence from the Netherlands suggests that reduced grid charges can outweigh revenue losses from curtailment if designed correctly (Verhagen et al 2026).

Option 2: Voluntary agreements on charging and discharging

Alternatively, batteries could opt in to voluntary agreements defining charging and discharging windows based on expected system conditions.

France's scheme operates along these lines; a voluntary annual time-dependent grid tariff based on system conditions which splits the country into multiple regions based on their energy profile at different times of the year. Battery operators commit to conform to usage rules within certain periods to minimise grid congestion and face a financial penalty for incorrect use.

This type of voluntary, non-curtailment-based option is better suited to France's grid which experiences less extreme grid congestion. Which option is most attractive will depend on the level of transmission congestion, as this type of voluntary non-curtailment-based option is less risk-free.

Define incentive structures to reward grid-friendly behaviour

Option 1: Fast-track connections

Curtailment or operational limitations must be rewarded. The UK grid is highly congested, and government has made tackling the connections queue the centrepiece of its energy strategy (Ofgem 2025d). Offering faster connections for demand-side assets in exchange for accepting curtailment rights could simultaneously:

- increase effective network capacity
- bring flexible capacity online sooner
- prevent new assets from worsening grid stress.

Greater focus from NESO on defining transmission constrained areas would be necessary. Again, the expected boundary flows calculated by NESO for the NOA (soon to be CSNP) should be useful here.

Option 2: Implement network charging discounts as a reward structure

Network charging discounts could also be used to reward batteries that locate in beneficial areas or operate in grid-friendly ways. In its 2025 open letter, Ofgem committed to "encouraging more efficient siting of demand and storage projects", for example by using transmission or connection charge premiums and discounts based on location. This is broad, and Ofgem should first clarify whether they intend to create these incentives through TNUoS or outside.

The French system offers discounts on network charging for grid-friendly operation, determined both by location and time. Any new grid tariffs system that rewards collocation with generation or grid-friendly charging behaviour must be aligned with TNUoS reform.

All of the above measures could be implemented without legislation. A new access product would need to be defined by Ofgem, including notice rules, eligibility and interaction with the balancing mechanism. Connection and Use of System Code (CUSC) code modifications would then be required to change the rules on transmission access rights and the connection process.

Operationally, NESO would need to identify transmission constrained areas that would be necessary to determine a grid-tariff structure or connection fast tracks. Again, the expected boundary flows calculated by NESO for the NOA (soon to be CSNP) should be useful here.

5.3 ENSURING AS MANY HOUSEHOLDS AS POSSIBLE HAVE ACCESS TO CONSUMER-LED FLEXIBILITY

5.3.1 Make the smart meter rollout an opt-out scheme

To accelerate delivery, government should change the rollout to an opt-out scheme for all households. This would be a subtle change from the current operation of the scheme where suppliers are encouraged to offer smart meters, but households can refuse. Including time for consultation, the change should be deliverable within a year.

In an opt-out scheme, households could still refuse a smart meter, but suppliers would not need to advertise them or require households to apply for one. This may also reduce the likelihood of landlords refusing smart meters as there would be minimal administration for them to engage with.

This change would also complement recent changes by Ofgem to require household suppliers to compensate homes for slow delivery, with a view to accelerating the rollout. An opt-out model would make it easier for suppliers to meet the new six-week standard that Ofgem has set.

While households may initially be mistrustful of smart meters, recent survey evidence suggests that once a meter is installed, 92 per cent of consumers find it relatively easy to understand their energy consumption and 77 per cent are willing to change their energy consumption behaviours (DESNZ 2026c).

5.4 ENSURING THE REGULATORY FRAMEWORK FOCUSES ON KEEPING BILLS DOWN

5.4.1 Shift the 50/50 incentive under the totex mechanism to 90/10 in favour of the consumer

While Ofgem has the power to reject or reduce the investment budgets which network companies ask for, it will always be difficult to judge how much they may be overstating their costs. With this in mind, we recommend that the incentive for underspending should be split 90/10 in favour of the consumer rather than the current 50/50 between consumer and company. This would maintain a small incentive for network companies to deliver under budget while ensuring that households are the primary beneficiaries of any efficiencies. Ofgem should initially implement this change for the upcoming draft determination for distributed electricity networks under the RIIO-3 framework in 2027. It should then consult on this change to the incentive mechanism for all network types at the next available re-openers. Such a change would be likely to affect the cost of capital ,and in section 5.4.2 we note how government could mitigate against this.

In addition, we recommend that EVAs should not be subtracted from the total underspend and should be paid separately to ensure that the maximum benefit of the underspend incentive goes to household bills.

5.4.2 Government should provide loan guarantees with strict standards for network companies to lower their cost of capital and improve performance

Borrowing costs are a major issue for network companies and there is a risk that pro-consumer policies like free electricity hours or shifting the totex mechanism in favour of consumers could increase concerns over cost of capital. The government should therefore expand its provision of loan guarantees for network companies to lower their cost of capital. In return, government should make access to these guarantees conditional on hitting the performance targets set out by Ofgem that many of them are currently missing – along with more transparent reporting, including ongoing performance monitoring for projects where network companies have provided EVAs.

Loan guarantees can be an efficient way of lowering cost of capital without adding to the government balance sheet. Guarantees can be especially useful for network companies who are financially stable and whose investments are a key part of the government's clean power plan.

There is already some precedent for public support boosting credit ratings for network companies. In the Netherlands for example, the government provided its network company TenneT with a guarantee on its loans for investment which boosted its credit rating to match the government's triple-A rating (Reuters 2025). In December 2025, the National Wealth Fund (NWF) in the UK also provided £800 million in guarantees to a £1 billion loan secured by Scottish and Southern Electricity Networks (SSEN) to upgrade the transmission network (SSEN 2025). In future, NWF could move beyond this kind of ad hoc support and be the vehicle to drive and expand conditional loan guarantees.

5.4.3 Require network operators to publish detailed maps of their network constraints

Publishing detailed constraint maps would enable external stakeholders outside of Ofgem to provide additional scrutiny to network company spending to ensure that investments were actually being delivered in the first instance, and second being delivered cost-effectively.

In addition, a clearer constraint map could also be a useful component of any future industrial strategy sector plans for the electricity network supply chain as visibility of the scale and type of constraints across the network could help manufacturers understand potential future demand.

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