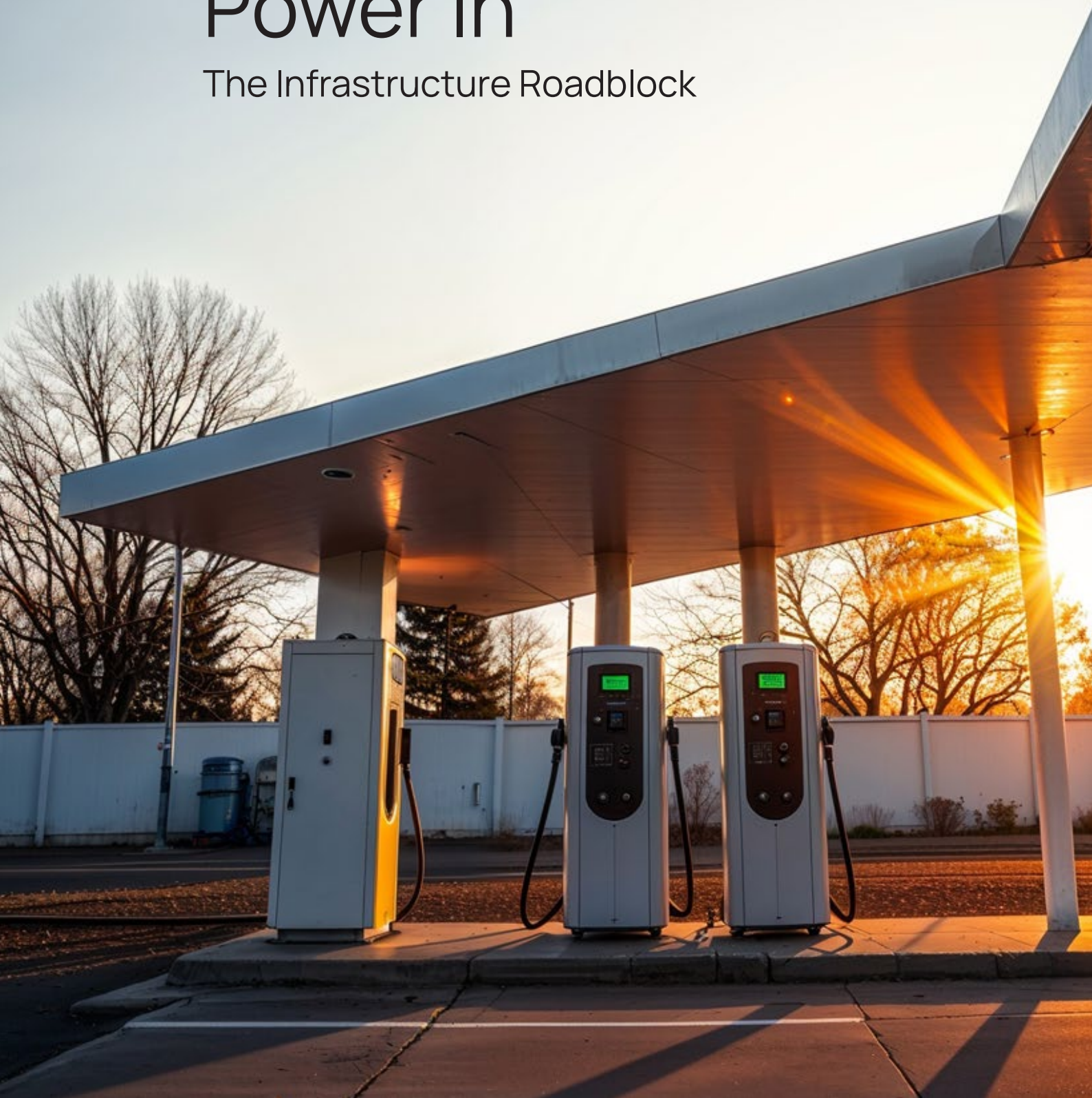




12 Pillars of Change Power In

The Infrastructure Roadblock



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Foreword

Power In was the second workshop in our 12 Pillars of Change programme. We didn't run it to find out whether there's a power problem. The first workshop settled that. More than a hundred depot trials, the same finding at almost every one: not enough power, and usually nowhere near enough. The gap is real, it's near-universal, and it isn't an SME problem. That's established. We didn't reopen it.

What we ran this workshop to answer is the harder question. Given the gap, what do you actually do about it? Who decides which depot gets power and which one waits? And why, when the country already knows the electric switch is coming, is the network being built around everything except freight?

So on 22 May 2026 we put thirteen people in a room at Aon on Leadenhall Street. Not thirteen people who agree, but thirteen people who have to agree before a depot gets power. The kind of room where the network operator corrects the truck people, and the truck people correct the network operator.

Here's what came out of it. The date for fleet electrification isn't set in Westminster. It's set when the total cost of an electric truck drops below the diesel it replaces, on battery economics the UK doesn't control. And when that crossover lands, it lands on the fleet's own buying rhythm, fast enough that the trucks can arrive before a grid connection can be built to meet them. The one variable the UK does control is whether the network is ready when they turn up. Right now it isn't.

And the reason isn't a shortage of metal. Most of the network freight needs could be built and paid for under the rules as they stand. What stalls it is the machinery: who gets capacity, in what order, at what price, on what schedule. The scarcest resource on the grid goes to whoever booked it first, against booked figures the network's own meters can't find. Freight, the most plannable demand a network ever sees, waits its turn behind them.

This report takes positions. It is not a record of consensus. Where the room had it wrong we say so and correct it, because an argument that won't survive a Treasury reader is no use to anyone. Where we're making TwentyForty's own call, we say that too. The findings are the room's collective view. The quotes are unattributed, by design. Nobody is tagged to a line.

What we're asking for is not a new pot of money. It's a system that stops handing the scarce thing to whoever booked it first, and starts handing it to whoever will use it. The trucks are coming on a date the country can't move. This is about being ready for them.

A handwritten signature in black ink that reads "Jamie Sands". The script is fluid and cursive, with the first letters of "Jamie" and "Sands" being capitalized and prominent.

Founder, TwentyForty

Executive Summary

The grid is rationing its scarcest asset on a number it already knows is wrong. UK Power Networks publishes half-hourly utilisation for every data centre on its distribution network. We pulled the full record: 96 sites, more than five million readings since January 2023. The median site drew 18% of the capacity it had contracted. The twelve largest connections, the ones holding the most network capacity, ran at a median of 7%. Nearly half the sites never once topped 40% of what they booked, even in their single busiest half-hour in three years. UKPN's own pre-publication assessment expected exactly this. Across these sites the contracted position overstates measured demand by roughly five to one on average draw, and by better than two to one even at each site's single busiest half-hour in three years.

Priority in the queue goes to whoever booked the capacity, not whoever will draw it. Freight, with an overnight duty cycle about as far from speculative as demand gets, waits behind reservations the meters say are mostly air.

It waits because the demand is coming on a clock the UK doesn't set. An operator swaps a working diesel when the electric truck's total cost of ownership drops below it, and not a month before. That crossover is being set abroad: battery and hybrid trucks outsold diesel in China for the first time in December 2025, and the export product is a cheap heavy electric truck now moving into Europe. When the crossover lands, a fleet on a five-to-seven-year refresh cycle doesn't trickle over. It turns at the cycle, and a large slice of it can move inside one or two buying rounds. An 11 kV depot connection takes eighteen to thirty-six months even in a market that works. Wait for the trucks before planning for the power and the trucks win the race. You build ahead of the curve, or you build late and dear.

And it waits unnamed. The strategic architecture being built on the Planning and Infrastructure Act puts data centres in the title and AI Growth Zones in the plan. EV charging hubs get one mention, in one consultation's introduction, as an example of what could benefit. Freight depots get none. The £4.5 billion of transmission reinforcement National Grid asked Ofgem for in June 2026 covers new generation, industry and data centres. EV charging isn't mentioned. The power to prioritise freight exists in statute and reaches distribution, exactly where depots connect. It's been switched on since March, when the first plan was designated, and that plan is a generation plan. Nothing freight-shaped runs through it. Freight is unnamed in the frameworks that confer priority. And it's unprotected: the reform's anti-speculation gates were built to catch speculative applications, and a haulier electrifying a depot it has run for thirty years is the opposite of speculative.



This report runs on one claim, bounded by one admission. The binding constraint is the mechanism. Most of the grid freight needs is already buildable and fundable under the rules as they stand; what stalls it is how capacity gets allocated, prioritised, priced and scheduled. The bound: this is not a promise that every depot connects. Fixing the mechanism unlocks the subset worth connecting, identifies the residual that never will be on economic terms, and routes that residual to shared and public infrastructure instead of pretending it away. How the depot-versus-public split lands is a range, held open on purpose, between the networks' forecast that puts all charging on depots and DfT's model that puts 92% on public hubs. The evidence doesn't justify resolving it either way.

What we've produced is a set of fixes, and the first is to the cost case, because it has been told wrong. Under the fully-shallow regime in force since April 2023, wider reinforcement is already socialised. The operator's real bill is the sole-use last mile. So the headline ask isn't a new fund. It's prioritisation and scheduling, delivered through a model we call LEAD, Logistics Electrification Ahead of Demand: model the logistics-dense clusters, designate the qualifying criteria through the same route generation already runs on, and split the funding so socialised reinforcement runs through the networks' ED3 plans and only the sole-use connections need a fund at all.

Four asks come out of it, set out in full at the close. One has a live route today: mandate the offer of flexible and ramped connections for depot charging, through the Connect pillar of Ofgem's demand-connections reform. The demand side already wants it; 81% of respondents to NESO's demand call for input said they'd accept a non-firm, ramped or phased connection for an earlier date. The other three follow: put transport decarbonisation inside the strategic-alignment criteria, make the reforms proportionate for the brownfield owner-occupier, and give commercial tenants a statutory right to install charging where they pay for it.

Three questions stay open, and we say so rather than paper over them. The switching date, when each operator retires its diesels, is the genuine unknown, and it's the sector's question to answer. The depot-versus-public split is held open on purpose. And the asks rest on timetables the sector doesn't control. These aren't gaps we hide. They're the work that's left.

The trigger is foreign and the date is fixed. The only thing in the sector's gift is whether the grid is ready to meet it. Today it isn't. This report is the case for changing that before the trucks arrive.





Section 1: Why now? The surge has a trigger

The date for fleet electrification is set in the finance director's spreadsheet, and the UK doesn't control the inputs.

Long-haul is a thin-margin business running long-life assets. A tractor unit works a core life of five to seven years, and the operator earns something like two to three pence in the pound doing it. On numbers like that, nobody swaps a working diesel for sentiment. They swap when the total cost of ownership of the electric truck drops below the diesel it replaces, and not a month before. Once it does, the logic stops being a choice. A fleet on a five-to-seven-year refresh cycle doesn't trickle over. It turns at the cycle, and a large slice of it can move inside one or two buying rounds.

“ HGV uptake won't be sentimental. It'll be triggered by TCO crossing diesel. People will flip on the next available opportunity.

So the question that matters for the grid isn't whether the switch happens. It's when, and how fast once it does.

An analyst in our follow-up work, who has spent years modelling heavy-duty demand, reads the trigger as the Chinese truck makers. The published data backs him. China's heavy-truck market is electrifying at a pace nobody outside it has matched: battery and hybrid trucks outsold diesel there for the first time in December 2025, and more than nine in ten of the world's electric trucks were built in China that year. Once a market that size goes predominantly electric, further growth needs export. The export product is a heavy electric truck built at scale on a battery cheaper than the European makers can match, and BYD and Sany are already moving into Europe with exactly that. The IEA reads it the same way: electric-truck total cost of ownership is already competitive in China on falling battery prices and is coming down everywhere else. That's what pulls cost under diesel and sets the date.

He's also clear it won't move the whole market at once. Two brakes. The grid is the obvious one, the connection that lands years after the trucks are ready to run, which is the rest of this report. The other is payload. On the heaviest long-haul duties the battery still costs you weight you could have carried as freight, and that holds parts of the market on diesel longer. This is a surge to plan for, not a uniform stampede.

The convergence isn't a forecast operators are waiting on. It's arriving, and for the lighter duties it's effectively here. DAF now sells its electric tractor on a pledge of five-year total-cost parity with diesel at 42 tonnes. The Green Finance Institute's figure, a 24 to 36-tonne electric HGV at three percent above diesel over five years, is an average:

plenty of regional and lighter duties already sit under the line. The Electric Freightway trials put parity within reach inside five years on high-mileage runs. Government's own read agrees on the shape, the smaller rigids crossing in the middle-to-late 2020s and the heaviest artics in the first half of the 2030s, sooner with support. Registrations are still small, but the direction is set: zero-emission HGVs were 1.4% of new trucks in 2025, 587 of them, up 170% on the year. Off a base that small the percentage flatters it. The direction doesn't.

The grid consequence is timing. Demand that arrives on a vehicle-refresh cycle can land faster than a grid connection can be built to meet it. An 11 kV depot connection takes eighteen to thirty-six months even in a market that works, and the queue has made that the optimistic end. Wait for the demand to show up before you plan for it and the demand wins the race. The trucks turn up and sit there waiting for power.



You can build the infrastructure before the trucks arrive, or after. After is more expensive.

That's not a case for panic. It's the case for building ahead of the curve instead of chasing it. The switch is coming on economics the country can't set. The one variable the UK does control is whether the network is ready when it arrives. Right now it isn't. And the reason isn't a shortage of metal. It's how the metal gets allocated, who gets to the front, and how long everyone else waits. That's where we start.



Section 2: The gap, and the honest range

The power gap is settled. Our first report put more than a hundred depot trials on the table and found the same thing at almost every one: not enough power, and usually nowhere near enough. A 150 kW charger the site can't support. A depot that drops to 20 or 40 kW chargers, or props itself up with a battery, because the grid supply won't carry the load the fleet needs. That held across operators, sizes and regions. It isn't an SME problem and it isn't anecdotal. We treat it as fact and don't reopen it here.



There is power. It's just not where you need it.

So the gap isn't the argument. The argument is what you do about it, and the first honest thing to say is that not every depot is going to plug a fleet of electric trucks into its own yard. Some will. Some never will. Most sit somewhere in between, and where a given site lands is the question the rest of this report is built to answer.

We'll set the bound in the same breath so it can't be misread.

The binding constraint is the mechanism, not the metal. The grid worth building is, for the most part, already buildable and fundable. What stalls it is how capacity gets allocated, prioritised, priced and scheduled. Fix those and the metal that's worth connecting gets connected, cheaper and sooner, and without reaching for a new pot of money to do most of it.

Now the bound. This is not a promise that every depot connects. It can't be, and we're not selling it. Reform the mechanism and you do three things. You unlock the subset of sites worth connecting. You identify the residual that never will be on economic terms. And you route that residual to shared and public infrastructure rather than pretend it away. A report that claimed otherwise would be easy to dismiss, and rightly so. Part of the value of fixing the mechanism is that it tells you which sites are which.

Which brings us to the number nobody has. How much fleet charging lands on depots, and how much on public and shared hubs? The honest answer is a range, and the two ends of it come from the two models that matter, which point in opposite directions.

At one end sits the distribution network's own forecast. UK Power Networks' DFES, built by Element Energy (now ERM), models HGV charging as entirely depot-based. Vehicles are pinned to operating-centre locations pulled from O-licence data, demand is shared out by licence count per depot, and the whole thing runs on a single uptake curve: TfL's London high-electrification case with a flat ten-year delay applied everywhere else. There's no public-hub concept in it at all. The method hasn't changed since 2020. Read it straight and 100% of the charging happens at the depot, because the model has nowhere else to put it. Scope that to UKPN, though, and read the 100% as a modelling artefact, not a finding. The model has no slot for a public hub, so it can't show one. That isn't the same as public hubs not coming. They already are. GRIDSERVE's Electric Freightway has a dedicated eHGV charging hub under construction at Strensham North on the M5, in National Grid's distribution area rather than UKPN's, a 161-bay lorry park, one of a pipeline of motorway sites built for electric trucks. A forecast built with no public-hub concept can't see sites like that, wherever they sit. The 100%-depot read is a modelling artefact, not a law of network planning.

At the other end, DfT's own freight tool says the reverse. MDS Transmodal's eHGV charging module, bolted onto the Great Britain Freight Model that feeds DfT's National Transport Model, runs a near-full-electrification scenario and lands 92% of all eHGV charging at public hubs: 371 of them, 17,000 bays, 6.9 GW of grid capacity concentrated on the M25, M1 and M6. This is government's own freight forecasting, not a consultancy slide.

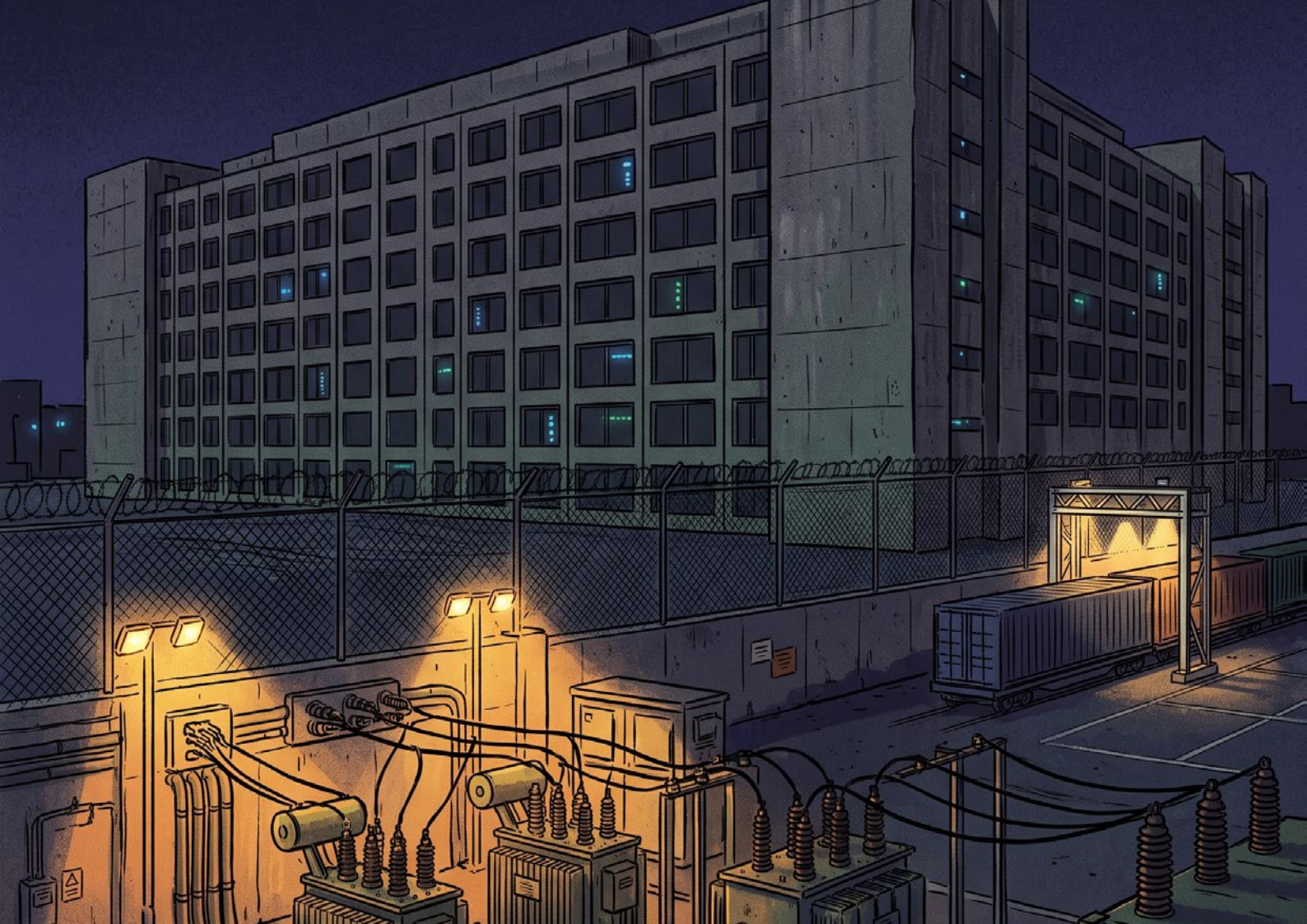
Two things about that 92% limit what it can carry. It's an end-state, not a date. The scenario assumes almost the entire fleet is already electric, so 92% is a steady-state ceiling, not a forecast of where we are or reach by any given year. And the public share is keyed to drivers' hours. The model sizes batteries for four and a half hours of driving, sends the driver to a public charger on the mandatory break, and splits the fleet into depot vehicles that charge overnight and 24-hour vehicles that only ever charge in public. A good part of the 92% is that modelling choice doing its work, not an observation about the market.



The 92% is contestable, and that's exactly what makes it useful. It rests on two assumptions, and they're the two things this report set out to test. First, that depot charging costs more than public on a full-cost basis, because depots have weaker economies of scale. Second, that public hubs have effectively unlimited grid capacity, fast charging and the same price everywhere. The room's position was the reverse on both, and the public-capacity assumption plainly doesn't survive contact with reality. The NAO found in December 2024 that only around 10% of motorway service areas have the power capacity to meet projected chargepoint demand to at least 2035. Public hubs hit the silent killer too. Flip either assumption and the 92% falls back toward depot.

So we use the number, and we neither swallow it nor bin it. What MDS actually shows is where the split lands if you price depots out and assume the grid problem away. The real world has neither luxury. The true split sits well below 92% public, and above the zero the network model implies, which puts the answer in the middle, more realistic than either end. MDS's own context concedes the direction: depots may not have good grid connections, and long-distance trunking needs public infrastructure. The direction holds. It's the magnitude that's soft, and we hold it open rather than resolve it depot-wards, because the cost case doesn't justify resolving it. That cost case is section 5, where the load-bearing assumption behind the 92% gets taken apart.





Section 3: Booked, not used

The capacity being prioritised for the grid is the capacity sitting most idle. That isn't a complaint about fairness. It's a measurement, and it comes off the network's own meters.

“Data centres got the strategy. Trucks got the queue.”

The numbers only land against the queue. The line of projects waiting for grid capacity runs to about 125 GW, 96 GW at transmission and a further 29 GW waiting at distribution. Britain's entire peak demand, the most the country draws on the coldest evening of the year, is around 45 GW. So the queue is close to three times the whole system's peak. And roughly 50 GW of it, more than the country peaks at, is data centres. That single demand type is what the strategic-connection machinery is being built around.

Now look at how much of that capacity the data centres actually use. UK Power Networks publishes anonymised half-hourly utilisation for every data centre on its distribution network, under its Presumed Open policy. We pulled the full record: 96 sites, more than five million half-hourly readings since January 2023, the typical site holding over three years of continuous

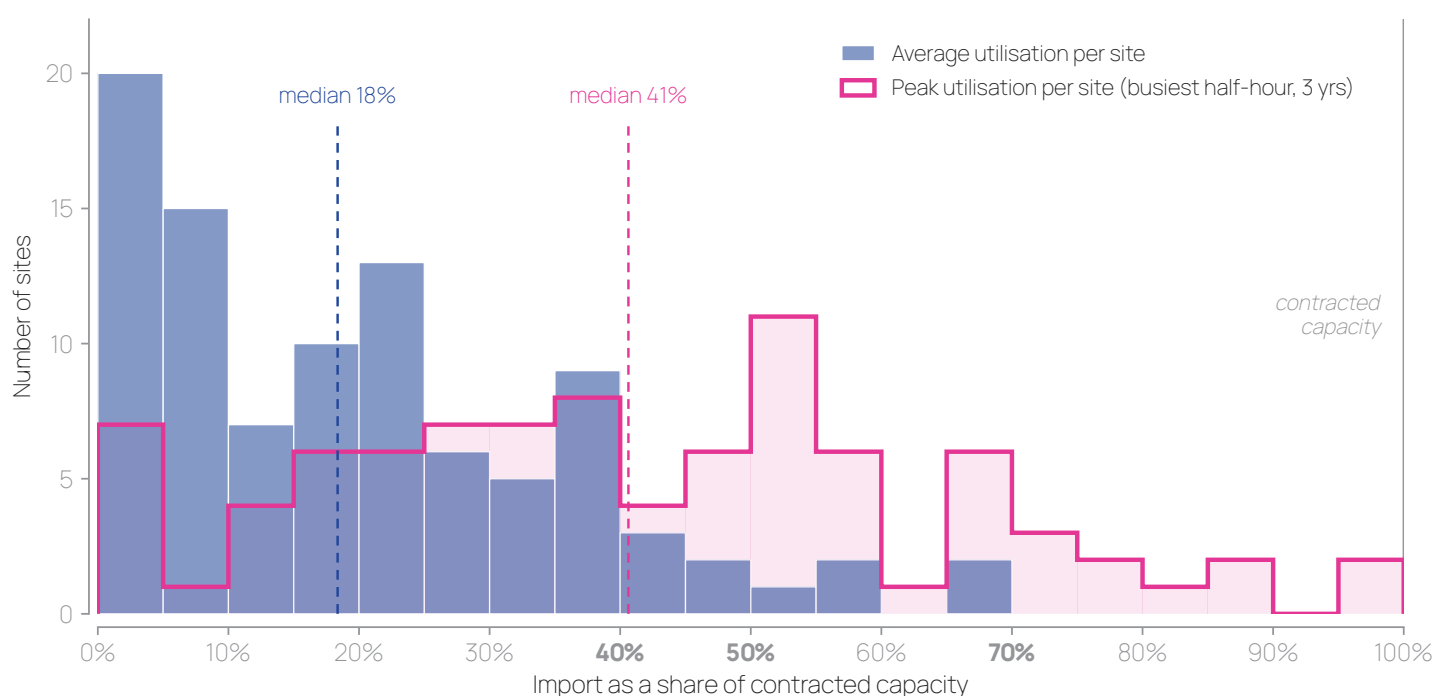
data. The finding is consistent across the whole population and across all three years. The median site drew 18% of the capacity it had contracted, averaged over the period. Even in its single busiest half-hour in three years, that median site reached 41%. Nearly half the sites, 48%, never once topped 40% of what they had booked. And the twelve largest, the extra-high-voltage connections holding the most network capacity, ran at a median of 7%. The biggest holders are the emptiest.

The peak figure is the one that answers the obvious objection, that capacity is held for spikes. Count each site's single busiest half-hour across three years and nearly half still never crossed 40%. The headroom isn't being kept for a spike that comes. It's just held.

The growth objection dies on the same meters. If the headroom were held for a ramp, three years of data would show utilisation climbing toward it. It shows the opposite. Across the ninety-three sites with continuous coverage, the median site's utilisation fell between 2023 and 2025, and more sites fell than rose. The twelve largest

connections, the obvious candidates for a compute ramp, drew 5% of their booking in 2023 and 6% in 2025. Even the minority that did ramp, twenty-one sites, ended the period at a median of a quarter of what they booked, and the best of them at under half. The headroom isn't filling. It's flat.

This isn't our spin laid over someone else's data. It's UKPN's own conclusion, written down before the data went out. The network's internal assessment for releasing the dataset, dated February 2025, records that it expected the figures to show most data centres don't use the capacity they ask for, that the pattern would hold across a whole year, and that publishing it could stop UKPN over-reinforcing the network and cut costs for consumers and for the next customer in the queue. The operator set out to demonstrate over-contracting, and its meters demonstrated it. UKPN is the only network that publishes utilisation at this grain. Every DNO holds the same data, and publishing it is the fastest way to prove or disprove that the pattern generalises. Consider that an invitation.



The point isn't really about data centres. It's about how capacity gets booked. The dataset happens to be data centres because that's where UKPN publishes utilisation; the booking behaviour is what generalises. A network plans the reinforcement it can defend, and it can't go to a regulator and justify upgrading a substation running at 40% on the strength of a contracted number the meter data won't support. So it plans off measured load. The trouble is that the queue, and priority within it, are allocated off the contracted number instead. Picture ten customers each contracted at 5 MVA and each drawing 1: that's 50 MVA reserved against 10 MVA of real load. Forty MVA locked up on paper, that the network can see isn't there and can't reclaim.

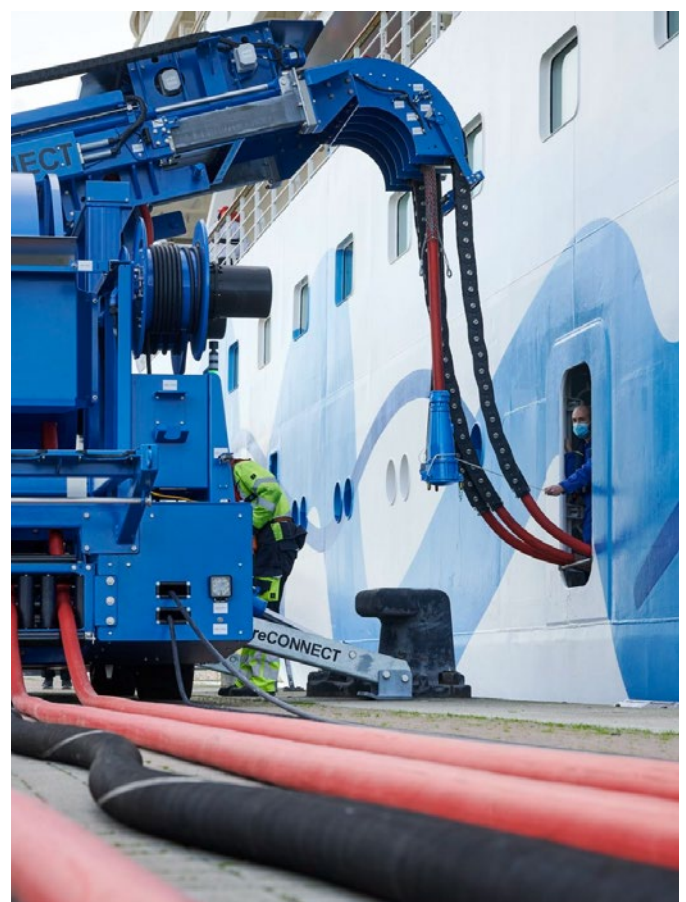
Be clear where this argument reaches, because it will be turned around. A depot connection will also run well below its rating on the meters. Trucks charge overnight, the load is seasonal, and a connection sized for the fleet's coldest, busiest week sits quiet the rest of the year. If low utilisation were the charge, freight would be in the dock too. It isn't the charge. The difference is what the headroom is for. A depot's spare capacity is a duty cycle the network can see coming: scheduled, overnight, growing on a fleet-replacement curve the operator can put a profile against. A speculative reservation is headroom for a load that may never exist. The ask that follows fits both: prioritise on demonstrated or committed load, and claw back what's booked and never drawn. A depot ramping against a credible growth profile passes that test on its own meters. A paper reservation fails it. The test is the point, and freight should be glad to sit it.

So the grid is rationing its scarcest asset on a figure it already knows is wrong. Across these sites the contracted position overstates measured demand by roughly five to one. Priority goes to whoever booked the capacity, not whoever will draw it. The change the evidence points to is to prioritise on demonstrated or committed load rather than a paper reservation, and to put a clawback trigger on capacity that's booked and never

drawn. That resets what "demand" means for queue prioritisation, from a reservation to a measured or committed draw, and it's the hinge the back half of this report turns on.

None of this is hidden from the people inside it. As one participant put it: "Government has deliberately chosen not to plan HGV charging centrally. The loophole is going to get used by somebody. Data centres are using it now." The capacity is there to be booked, so it gets booked. Freight waits behind it, with a duty cycle a network can plan around: an overnight load shape that's about as far from speculative as demand gets, queued behind reservations the meters say are mostly air.

The same pattern turns up at the level of a single asset. A port operator energised a new shore-power connection in June 2026, rated at 15 MVA, about 12.5 MW. It expects the connection to sit well below that ceiling almost all the time: nothing overnight, a few hours of ferry charging across the day, the occasional cruise ship, and even the largest vessel drawing only around 6 MW. Capacity installed, paid for, and used in a narrow window.



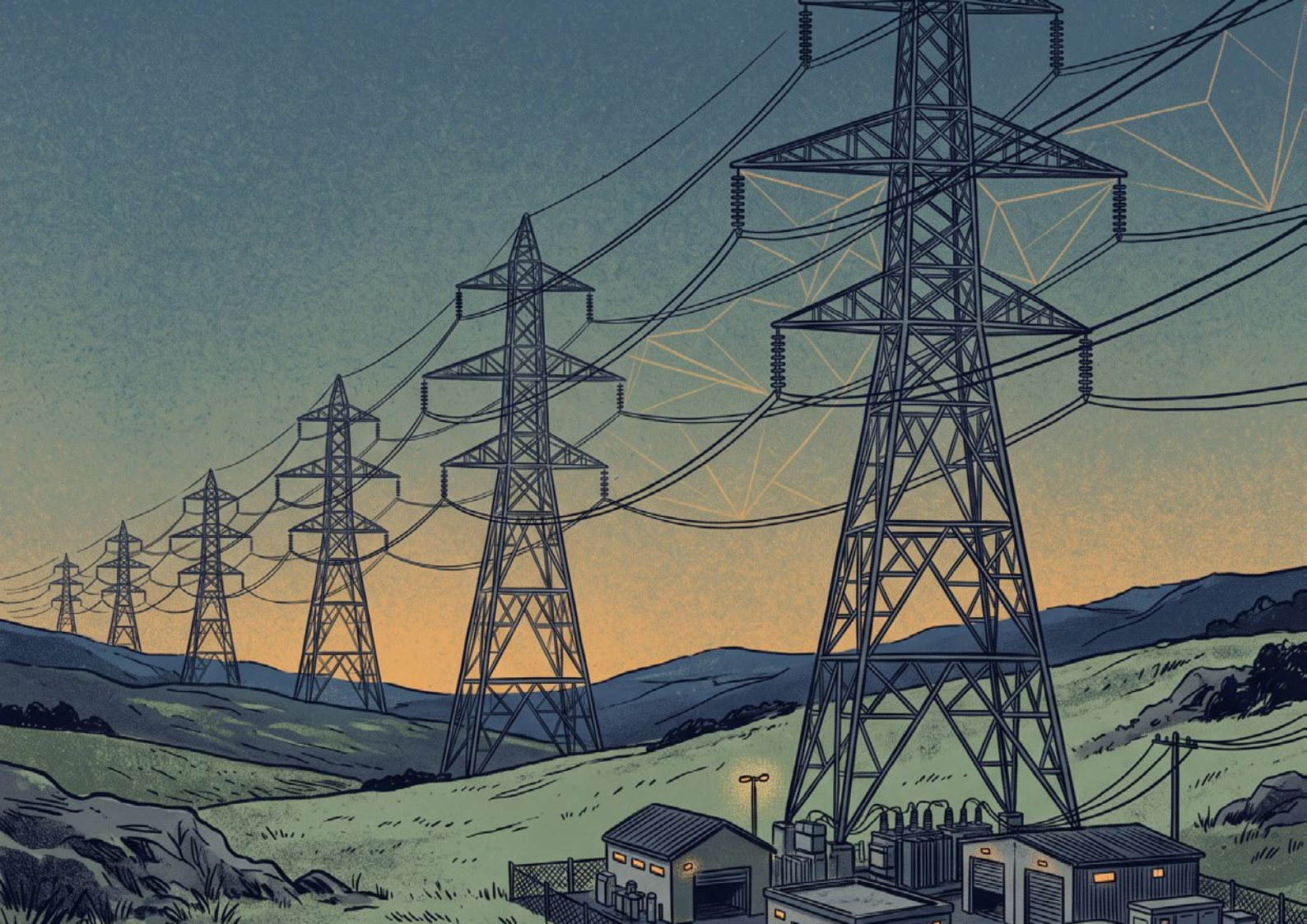


A port just switched on 12.5 MW. It'll sit empty most nights.

Carry that as illustration, not measurement. The connection only went live as this report was being written, so there's no draw history to put a number on the spare yet. But the shape is the dataset in miniature: capacity sized for a peak that rarely comes, with nothing set up to use the gap in between.

The constraint isn't that the metal can't be built. It's that the scarcest thing on the network, a place in the queue and the capacity at the end of it, is being handed out on a number the network's own data says is inflated about five to one. Fix how that capacity is booked, prioritised and reclaimed, and a large part of the grid that freight needs turns out never to have been missing. Just spoken for. Which raises the question the next part answers: if the capacity is booked and not used, who decides who gets it, and why has the system been built to see data centres and not freight?





Section 4: Unnamed and unprotected

Freight is different, and you don't have to take a trade body's word for it. The interesting thing about the case that freight needs treating differently is who's making it. A regulated network operator, the freight bodies, and the body that speaks for the energy suppliers all land in the same place, and they get there from three different starting points that don't usually agree on anything.

Start with the network operator, because its evidence costs it something. A DNO connects whoever turns up and recovers its costs either way, so it has no stake in which sector wins the queue. Where it does have a stake is in building. A network earns its return on the assets it builds, which is exactly why the regulator makes every DNO wall its system-operator function off from its network-owning one. So when a DNO says the problem is allocation rather than metal, that's a network arguing against its own build case. It's worth more than the same line from someone selling trucks. The distinction it draws is simple. A data centre is a commercial bet the market is free to make. A logistics fleet is being pushed to electrify by government policy: phase-out dates for new diesel trucks are set for 2035 and 2040, the CO2 framework to enforce them is in consultation, and ZEHID is public money spent to accelerate the switch. Treat a bet and a policy obligation the same in the connection rules and you get the outcome we have now, where freight queues behind hyperscalers for capacity it needs to deliver the government's own timetable.

The freight side says the same in public, and has done for over a year. Logistics UK argued in March 2026 that the demand-connection reforms risk systematically underestimating eHGV charging demand while data centre applications dominate the queue, and that freight corridor charging is well-evidenced and aligned with government targets in a way speculative data centre applications are not. SMMT wants depot connections fast-tracked the way the government wants to fast-track AI data centres and renewable generation. Energy UK, in its response to the strategic demand consultation in April 2026, argued the government should look past data centres and widen what counts as strategic demand to take in EV charging hubs alongside housing, energy storage, hydrogen and the rest. Depot charging is exactly the kind of demand that logic points at, named in the response or not. The convergence is three-sided: a network operator, the freight trade bodies, and the suppliers' body, all saying freight is different, from three interests that don't share a motive. And it isn't only a British reading. The IRU told Brussels the same thing in response to the EU's Grids Package, whatever the package does for public charging, depots and logistics hubs still need grid capacity where

they already stand, because an operator can't move its depot to follow the grid. Same argument, different flag.

All three run into the same wall. The strategic architecture being built on the Planning and Infrastructure Act names data centres 75 times in the consultation that carries it. It names AI Growth Zones. EV charging hubs it mentions once, in the introduction, as an example of what could benefit, and that is the document's only reference to EV charging of any kind. Freight and HGVs it mentions zero times. So the category that looked like it might cover them isn't a category at all. It's an aside, and even the aside reads either way, public passenger charging or depot charging, with nothing in the frame resolving it toward depots. One passing mention, ambiguous at that, is in practice the same as not being named. Under the reform's Plan pillar, strategic importance is anchored to the Industrial Strategy, the AI Growth Zones, and the spatial and regional energy plans, and transport decarbonisation appears in none of that frame. The queue's own machinery says the same. Under the Gate 2 strategic-alignment test, generation projects qualify by aligning to Clean Power 2030 capacities. Every demand project,



freight included, currently falls into the residual category, not within the scope of any plan. Freight isn't just missing from the strategy documents. It's unclassifiable in the queue's own alignment test. techUK is actively pressing for the definition to reflect the full range of data centre and compute uses. So the architecture isn't neutral ground that freight has failed to claim. It's being written, right now, by people with an interest in keeping the priority pointed elsewhere, and the risk to freight is deprioritisation by omission rather than anything as honest as explicit exclusion.

On 3 June 2026, National Grid Electricity Transmission went back to Ofgem under the RIIO-T3 re-openers mechanism and asked for roughly £4.5 billion of physical transmission reinforcement across England and Wales. The re-opener exists for exactly this: a transmission owner returns mid-price-control and asks for more money when the network need has moved past what the original settlement assumed. The stated driver is the demand surge, the queue that grew from 17 GW to 96 GW at transmission in the six months to June 2025. The submission covers new low-carbon generation, major industrial users and data centres. EV charging infrastructure is not mentioned. Not considered and rejected. Just absent.

It's absent for a structural reason, not a political one. Fleet charging connects at distribution, at 11 kV or 33 kV through a DNO, and the £4.5 billion machinery operates at transmission, where the data centres and large industrial loads sit. As one analyst put it to us after the workshop, the mechanisms built to act on the recognition that EV charging hubs matter are all pointed at the wrong voltage level. The transmission system is mobilising serious capital at pace in response to the surge. There's no distribution-level equivalent moving anywhere near as fast, or at all.

The easy version of this argument is wrong and a careful reader will catch it. The temptation is to say the prioritisation power doesn't reach distribution. It does, and it's switched on. Section 18 of the Planning and Infrastructure Act inserts a new subsection into section 16 of the Electricity Act 1989: when a distributor decides how to prioritise the people requiring a connection, it must have regard to the designated strategic plans. It's a have-regard duty, which means it's only as strong as the plans it points at. And there is now a plan to point at. The first designating regulations were made on 4 March 2026 and came into force on 30 March, designating the Clean Power 2030 Action Plan. Since that day, every DNO deciding who gets a connection has been under a live statutory duty to have regard to a designated plan, and the only plan designated is a generation plan. The same section goes further. It amends the exceptions to the duty to connect, so a distributor can be excused from connecting where doing so would not accord with the designated plans. Designation stopped being advisory in March. Plans now shape who gets priority, and can shape who gets connected at all, and freight appears in none of them. The capacity-allocation machinery, the queue position and the capacity reservation, is being built for demand at transmission first, and the distribution extension is promised as soon as possible, with no date attached.





The wiring is built. It's been live since March. Nothing freight-shaped runs through it.

The system can clearly reach distribution when it chooses to: the new 5 MVA readiness rules, taken up in section 5, landed at distribution on 1 June 2026 and reach depot connections directly. It just hasn't pointed the strategic recognition, or the investment, there.

This is not freight at the back of the queue. That framing is wrong on the mechanics, and a DNO will tell you so: the queue stopped being first-come-first-served when the reforms went live in June 2025, and the current data-centre work is weeding within a sector, not bumping one sector behind another. The sharper, truer charge is that freight is unnamed in the frameworks that confer priority, and unprotected against the reform's own anti-speculation measures, the deposits and readiness gates and planning evidence at the point of application, which could catch depot applications even though a depot electrifying to meet the government's own timetable is the opposite of speculative. Unnamed and unprotected. That's the gap the designation ask is built to close.





Section 5: What it costs, and who's blocked

The cost case for depot charging has been told wrong, including by people in the room, and getting it right makes the ask smaller and harder to dismiss. The wrong version is that the operator carries the whole upstream grid bill, that connecting a depot means paying for the reinforcement all the way back up the network.

Since April 2023, demand connections at distribution sit on a fully-shallow charging boundary. The connecting depot pays for its sole-use extension assets, its own substation and the run that joins it to the existing network. Wider network reinforcement is funded by the DNO and socialised across all consumers through use-of-system charges. There's a ceiling on that socialisation, the high-cost cap at £1,720 per kVA of contracted capacity, above which the customer pays the excess. For most depots the cap is high enough that the wider reinforcement is socialised. So the upstream bill the workshop framing put on the operator has, for most demand at distribution, already moved off the operator and onto the shared base.

That changes the shape of the problem, but it does not make it go away. Three things still land on the operator under the fully-shallow regime. The sole-use extension assets, which at multi-MVA scale are still a real number, the operator's own substation and the cable run. The high-cost-cap excess, on constrained or isolated sites where the reinforcement-per-kVA runs large. And above all, timing: whether and when the socialised reinforcement is scheduled, built, and allowed for in the DNO's price control. State the silent killer as who pays for what, and why

a project stalls, not as the operator carrying the whole upstream bill. The reframe makes the funding ask smaller, because any fund now only has to reach the sole-use last mile, not a whole-estate connection.

This also resets what we're asking for. The route the report was reaching for, get wider reinforcement onto the regulated asset base and socialised, is already the default. So the ask isn't a new funding pot for shared reinforcement. It's prioritisation and scheduling: get freight recognised as needed in the queue, and get the strategic reinforcement for freight clusters into DNO ED3 allowances so it's built ahead of demand rather than after it. A DNO engineer made the same point from the other side: apportionment is set in the regulations, not chosen by the DNO, so the naive "we want more socialised costs" ask is partly already delivered and pushing it further runs into a catch-22. Target the residual instead: the tail above the high-cost cap, the postcode lottery for sites a long way from spare capacity, and the standing-charge penalty the Targeted Charging Review put on building ahead of demand.

Clustering shrinks the bill further. One operator carrying a multi-MVA reinforcement over its own throughput is the worst case

for cost per kWh. Cluster several sites in a logistics-dense geography into one shared reinforcement and you spread that cost across users, the same economies-of-scale logic a public hub relies on, turned to the depot side. For dense-but-expensive sites, clustering largely dissolves the cost floor.

Clustering reaches a lot. It does not reach everything. What it can't touch is the isolated depot in a constrained part of the network with no neighbours to share a connection with. That site, not "every expensive site", is the true residual long tail. A DNO engineer put the physical floor in one line: "Just because you happen to be here, your connection cost is fifty times what it would be five miles down the road." No amount of allocation reform, queue reform, or redefining demand touches that, because the cost is driven by distance to adequate capacity, voltage level, and local headroom, none of which a policy lever can move. The range is physical and huge. A connection can be a few metres to the cable in the street, or a kilometres-long dig under a railway and a motorway to reach capacity that exists somewhere else. At the far end sit the connections that are simply uneconomic, and those never get built. That tail is the bound the prioritisation case has to be honest about.



The booked-not-used evidence in section 3 proves there's slack in the queue and in specific places where data centres over-contracted. It does not prove that any given depot can get an economic connection. The honest landing is that a well-sited subset electrifies on depot, the strategic clusters and corridors get built through designation and ahead-of-demand reinforcement, and a real residual routes onto shared and public infrastructure, consolidates onto fewer better-connected sites, or accepts that it lags.

It also means we don't get to resolve the depot-versus-hub question in the depot's favour and call it done. The cost floor is one of the forces pushing the split back toward public: if an on-site connection is uneconomic for a meaningful share of operators, more charging routes to shared and public hubs than a pure depot-first worldview allows. Which way a given site falls is situational, and section 10 is where the split is held open and why.

So much for who pays. The other half of "who's blocked" has nothing to do with the grid, and it's the half nobody costs. It's the lease.



It used to be location, location, location,
and now it's location, location, power.

Landlords have noticed before the law has. Power allocations are being written into rent, one site quoted at £35,000 a month against £20,000 for backing a defined kVA, and lease terms are stretching to fifteen and twenty years with breaks at five and ten, to match the kit rather than the property cycle. The market is repricing power. The legal framework hasn't moved with it.

For a tenant the maths is structurally hostile. UK logistics leases run five to fifteen years, often ten with a break at five. Charging kit has a twenty-five-year asset life, and specialist EV charging leases want terms of eight to twenty-five years to match. Even with a grant covering most of the chargers, the residual investment doesn't recoup inside a normal lease term. Dilapidations clauses can require full reinstatement at expiry, chargepoints, cabling, switchgear and trenching pulled back out, at a cost that can run to hundreds of thousands even where underground cable makes removal pointless.

Then there's the substation. Where the connection needs a new one, the landlord, the operator and the DNO are three parties on three separate leases, and any one of them can stall the project. That structure is the mechanism by which the depot grant's exclusion of DNO works transmits into stalled depots. The grant can fund the chargers. The substation lease, the wayleave, the upgrade cost and the landlord's consent to site high-voltage kit on the demised premises are all separate gates, and the tenant carries the risk through every one.

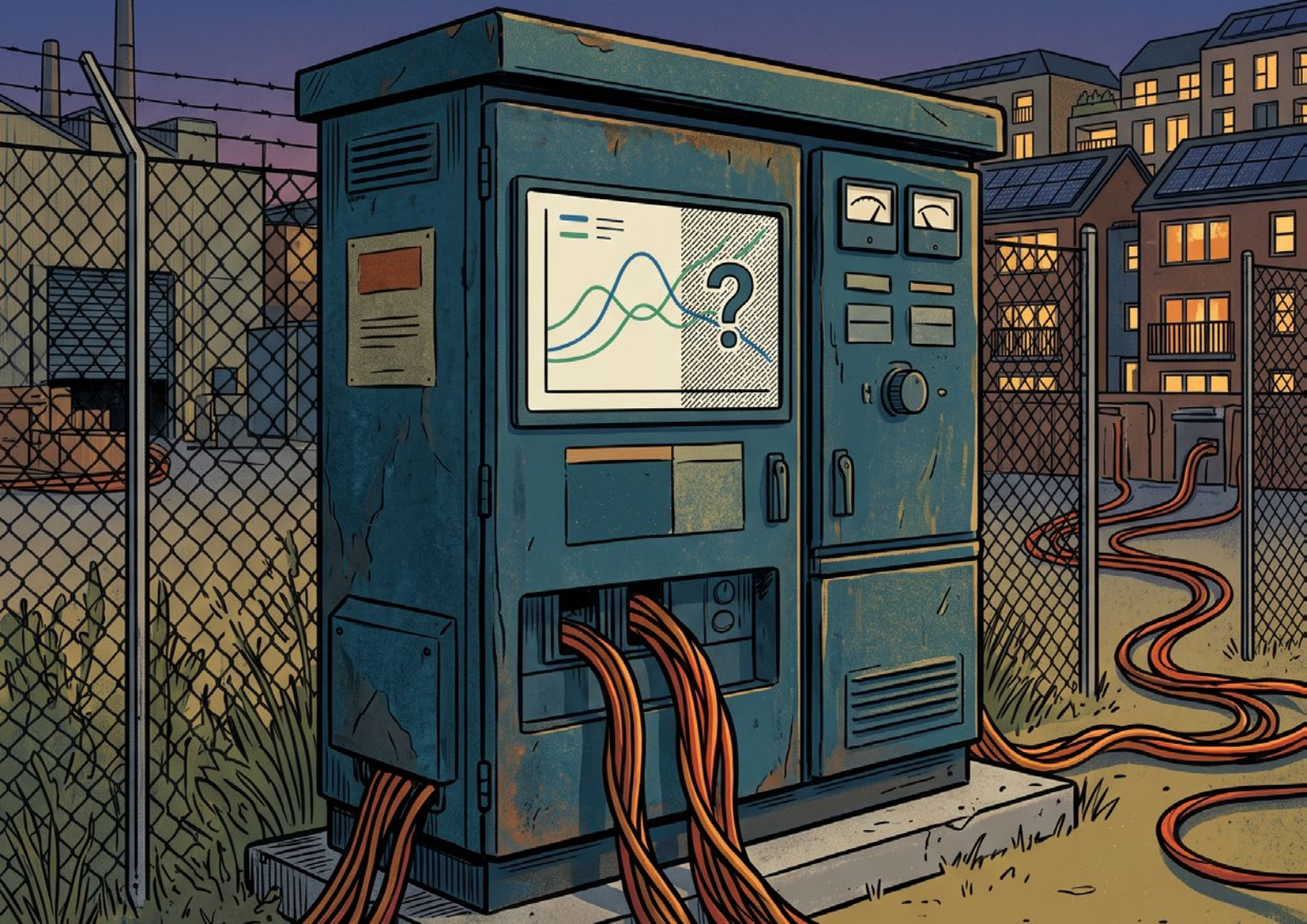


For a third-party logistics operator on a standard lease, the combination is fatal to the investment case without a specific lease amendment at the point of installation: capital not recoverable through service charge, reinstatement at break, vacant-possession risk.

From 1 June 2026 the lease barrier got a connection-process twin, at the top of the range. The new minimum-information rules bite at 5 MVA and above. Serious depot charging crosses that line as power scales, so the largest depots are squarely in scope while smaller multi-MVA connections sit below it. Where the rules apply, a tenant operator that doesn't own the land needs Heads of Terms to apply, and those Heads of Terms explicitly will not count as evidence of secured land rights for queue-management milestones. An owner-occupier skips the Letter of Authority and the Heads of Terms entirely, and can evidence its land rights directly. The threshold decides which sites the rule catches. The asymmetry it encodes runs wider. So the operator who doesn't control the freehold is disadvantaged twice: in what it will sensibly sink into a site it doesn't own, and, once it crosses 5 MVA, at the very point of joining the connection queue. The lease barrier and the connection-queue barrier are the same barrier seen from two angles.

Two asks fall out of this. One is proportionality: make the reforms' Phase 2 treatment proportionate for brownfield owner-occupiers, so the readiness bar built to deter speculative data centres doesn't fall with equal weight on a haulier electrifying a depot it has run for thirty years. The other is the one concrete legislative fix in this whole report that doesn't wait on any consultation. Energy UK has already published the recommendation: stop landlords from outright refusing a tenant's request to install charging. The working model exists in California, where Civil Code section 1952.7 gives commercial tenants a right to install EV charging where they pay for it, subject to conditions. The UK hasn't matched it on either side. The Renters' Rights Act 2025 rebuilt residential tenancy law and created a statutory request route for pets, which a landlord can't unreasonably refuse. Charging got nothing, and the commercial side got nothing at all. A statutory commercial tenant right to install is the obvious gap, and it lands with the transport and housing departments rather than the energy ones, which widens the reach of what we're asking for.





Section 6: The forecast can't see the load

There's a hole in the forecast the whole report rests on, and it's worth understanding before anyone tries to plan against the numbers. Section 2's range, the space between a 100%-depot forecast and a 92%-public one, is built on demand forecasting. That forecasting has a structural blind spot, and the blind spot is not a misunderstanding that a better data feed clears up. It falls straight out of how two kinds of network operator are set up.

A DNO is geographically obligated. It has to forecast, plan, and carry every connection inside its footprint, whether it wants the work or not. An IDNO is something else: a commercially incentivised adopter that earns its return on the assets it adopts and the use-of-system charges that follow. And it isn't tied to any patch. It can adopt anywhere in mainland GB. Those two see a connection differently because their incentives differ.

At the licence level the two are close to a mirror image. Both hold a distribution licence under the same provision of the Electricity Act, and an IDNO carries the same security, continuity, certification and guaranteed-standards conditions as a DNO, so a customer on an IDNO network gets the same service and performance standards. The material difference for this report is the geographic freedom: an IDNO can adopt anywhere, a DNO can't. On price, the worry doesn't hold up either. Ofgem's Relative Price Control caps IDNO domestic charges at broadly the host-DNO-equivalent level. For the non-domestic loads this report is about, depots and hubs, the equivalence isn't a hard licence cap but runs through a non-discrimination duty

and a published charging methodology, with IDNOs mirroring the host DNO's charges in practice. Either way the connected customer isn't paying more for sitting behind an IDNO.

When a multi-MVA load connects through an IDNO, the DNO sees the connection but not the demand behind it. It approves the connection design, signs off the legal plans, knows the site type and what it's for. What it doesn't get, because the network downstream of the interface is the IDNO's to plan and operate, is the demand profile, the ramp, or the utilisation. The harm isn't to the point of connection, which works fine. It's to forecasting.

And operators take the IDNO route for a good reason. An IDNO pays an adoption value for the connection assets, recovered through the use-of-system charges that follow, and that payment offsets the sole-use bill section 5 named as the operator's real cost. So the cheapest route to a connection is the one that hides the load from the forecast. The incentive gradient points into the blind spot, and the seam grows as the transition does.

Follow that through, a DNO's demand forecast models HGV charging off the locations it can see, the depots in its public datasets. If a chunk of new multi-MVA depot and hub load gets adopted by IDNOs and never surfaces in that forecast, the network's own planning view is blind to exactly the loads the transition is adding. That's not a footnote. It's a gap in the forecast the report's depot-versus-public range is built on.

“The thing the forecast is supposed to catch is the thing the interface lets through.”

A DNO supplied the worked example that confirms it, and it's about rooftop solar rather than trucks, which makes it cleaner because nobody can accuse it of being a freight-lobby number. The forecast said a thousand installations by 2028. Five hundred were already in, adopted through an IDNO and invisible to the DNO's own view. Its reporting showed a forecast barely started when the ground truth was half-done. Swap rooftop solar for multi-MVA depot charging and the same mechanism hides exactly the load the network most needs to plan for.

Inside the networks the same tension shows up by design, and it's on the public record. Ofgem makes every DNO separate its system-operator function from its network-owning one, because the two pull against each other. A DNO earns its return on the assets it builds, so it has a standing reason to favour a new transformer over a cheaper flexibility solution. The system-operator side is there partly to check that, on the logic that paying for behaviour change often beats building. Most DNOs run this as a functional separation; some have gone further and set the DSO up as a separate legal entity, with independent oversight and a published agreement governing how the two sides deal with each other. The point isn't the org chart. It's that the build-more pull is real enough that the regulator made everyone wall it off. Naming it isn't network-bashing. It's the structure the networks built to keep themselves honest.

The fix isn't to choose DNO or IDNO. It's to fix the seam between them. A shared demand-data standard at the DNO/IDNO interface, so the planning conversation, demand profile, ramp, import and export, happens regardless of who holds the customer relationship. That turns a structural tension into a process standard, which is the kind of thing a regulator can mandate. It's a small ask with a large payoff: it closes the hole in the forecast that every demand-side number in this report, and in the reforms, is quietly exposed to. The modelling work that section 8 sets out only works if it can see the load it's modelling. Closing this seam is what lets it.



Section 7: Name freight, designation by criteria

The fix here isn't new law. The mechanism the sector needs already exists in the statute book. It's just not pointed at HGV charging.

Section 4 named the duty and showed it running. When a distributor decides how to prioritise the people requiring a connection, it must have regard to the designated strategic plans. That duty is live, it sits on DNOs, and it lands at distribution, exactly where depots connect. The power is there and it's switched on. What's missing is a designated plan with freight in it, and the route from "the power runs" to "the power covers freight" is shorter and better built than most people in this debate assume.

Start with how the mechanism is meant to work. Section 18 of the Planning and Infrastructure Act 2025 lets the Secretary of State designate plans by regulations. NESO must then have regard to those plans at transmission, and the section 16 (2A) duty makes a DNO have regard to them at distribution. The thing being designated is a plan, and the plan sets criteria. It doesn't hand over a list of blessed projects. It sets out the method by which a project qualifies, and anything meeting the method qualifies.

Generation already runs this way, so this isn't a theory. The Clean Power 2030 Action Plan is designated by negative procedure, and NESO and the DNOs prioritise connections against it on technological and locational criteria. No minister sits in a room naming wind farms. A project meets the criteria or it doesn't.

The precedent isn't only domestic. The EU went past criteria altogether. AFIR fixes truck charging pools on the TEN-T by law, at set intervals and minimum power, on dates staged to 2030, a pool every sixty kilometres on the core network by the end of the decade. Nobody calls that picking winners. It's what lets a grid plan. And the follow-through proves the rest of this report's point: even with the locations mandated, delivery hit the connection wall, and Brussels' answer last December was connection machinery, permitting deadlines for large charging stations and anticipatory-investment guidance for regulators. The where was never the hard part. What this report asks for is more modest than what the EU has already legislated. That is the model the freight side needs, and the reason it's the right model is structural, not aesthetic. "Build a strategy and nominate the projects" assumes a department that can pick sites and stand behind them. Neither DfT nor OZEV is set up to do that for fleet charging, and asking them to would put the whole thing on a timeline measured in years. "Set the criteria, let the market deliver" fits how the sector already works. Operators, developers and infrastructure investors find the sites. The criteria decide which ones count.

“If government won't plan it, the industry will.”

One analyst's refinement, made after the workshop and consistent with a submission put to DESNZ in April, is that category-level designation is the native design, not a workaround. Set a criterion such as public commercial vehicle charging hubs above a capacity threshold within a defined distance of the strategic road network, and the qualifying projects qualify themselves. The evidence to populate those criteria already exists. MDS Transmodal's model shows where charging demand clusters and at what scale, which is what criteria need and all they need. The model informs the line. It doesn't pick the sites, and it shouldn't: operations can flex a site's exact location and size to where the grid has room, which is the sector's advantage, and section 9 returns to it. The tool to evidence criteria-based designation is sitting on a shelf. It just isn't being used that way.

Here is where the bound has to be carried. Designation by criteria isn't a switch that connects every depot. It's a filter. Criteria draw a line, and the line has two sides. On one side sit the clusters and corridors worth building ahead of demand. On the other sits everything the criteria don't reach, which routes elsewhere or waits. That's section 2's bound made operational. A criteria-based regime that qualified everything would qualify nothing, because it would carry no information. The discipline of the line is the point.

Now the part that proves the current route is broken. The route the sector is pointed at today is case-by-case strategic nomination: a department sponsors a project through the Connections Accelerator Service, and NESO decides whether to treat it as a strategic investment need outside the normal charging rules. On UKPN's account, that route is refusing exactly the projects HGV charging depends on. NESO rejected somewhere between ten and twelve motorway service areas submitted for strategic consideration, approving them only in Electricity North West's area. We carry that

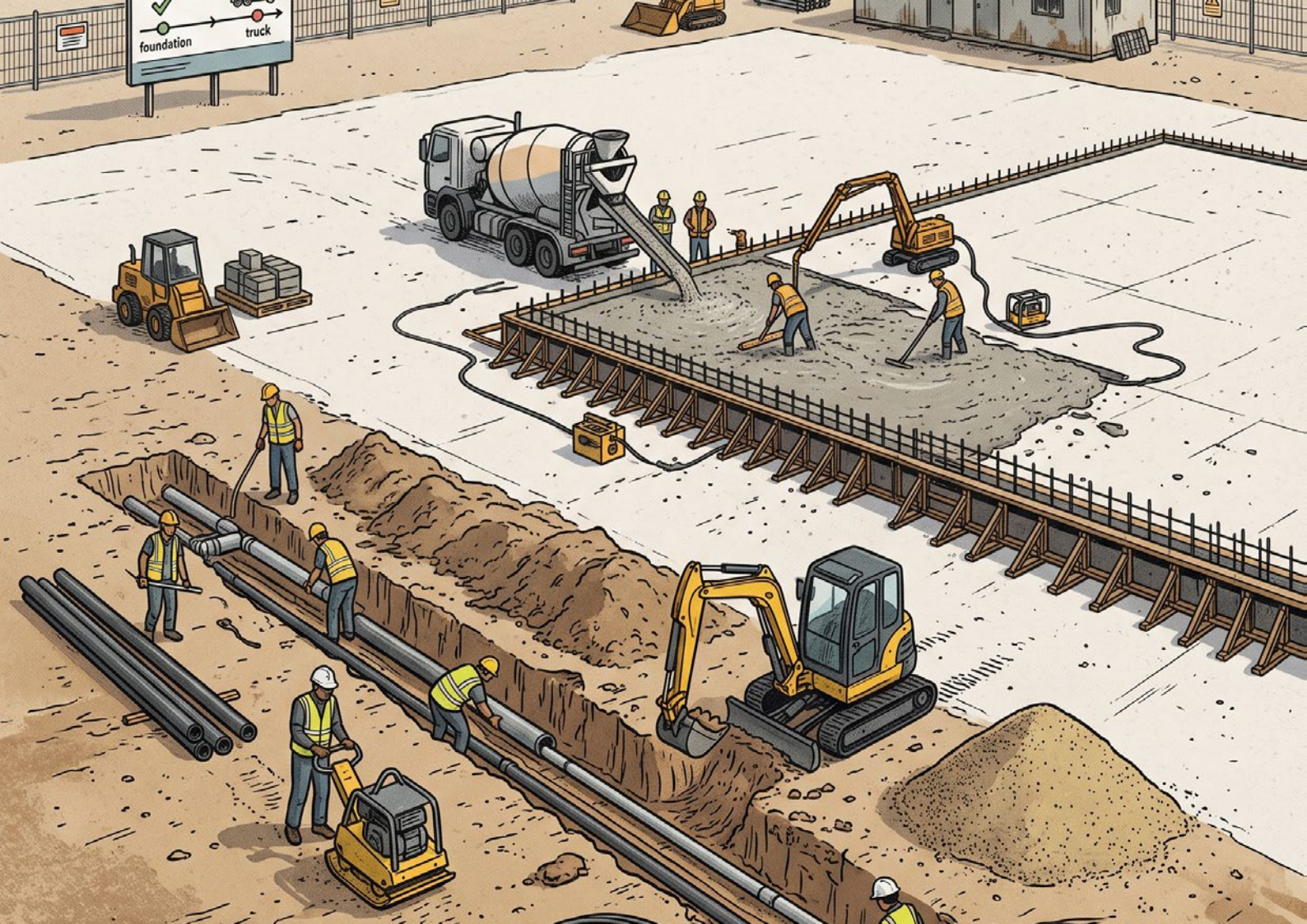
as UKPN's account, because the numbers aren't publicly documented, but the direction is what matters: the strategic mechanism the sector is being sent to is turning these projects away. A distribution network voice put the broader verdict on the sponsorship route more bluntly, that the Connections Accelerator Service hasn't achieved anything. Carry that as a DNO's opinion rather than as outcome data, but it's a useful counterweight to anyone selling CAS as the working answer.

So the case for criteria-based designation isn't that it would be nice to have. It's that the alternative, central nomination, is observably failing in the field.

There's a temptation to reach for section 165A itself as a clean precedent. Don't. A distribution network source was clear that 165A is a weaker freight precedent than it looks. It was about transmission, not distribution. It was about supply, not demand. It was never a mechanism for promoting one connection type ahead of others. Formally prioritising a sector would itself need primary legislation, because the rules require fair and equal treatment of customers, and primary legislation is either a non-starter or a ten-year wait. That cuts straight against the easy version of this ask, and it's why the argument the report makes is the criteria route and not the primary-legislation route. A designated plan with qualifying criteria reaches commercially delivered infrastructure, Clean Power 2030 proves it does, and it does so without naming freight as a favoured sector. It squares what government already mandates with what its networks are told to prioritise, rather than picking a winner.

The status of the mechanism: the section 165A power commenced in December 2025 and was first used on 4 March 2026, when the designating regulations brought the Clean Power 2030 Action Plan into force as a designated plan from 30 March. So the mechanism isn't theoretical. It's operating, for generation. On the demand side, government is consulting on using the same power two ways at once. Proposal 2 would designate a published list of named projects, central nomination at scale, the model this section just watched fail through the Connections Accelerator Service. Proposal 3 would align data centre connections to regional targets set in a future data centre strategy, which is criteria-shaped designation for one sector, and it's the model this report asks for, pointed at freight. The DESNZ response that would settle whether 'EV charging hubs' means passenger charging, freight, or both was due within twelve weeks of the April close and hadn't appeared by mid-July. So the mechanism is live, the generation precedent is running, a sector-strategy template is on the table for data centres, and nothing yet touches transport. Naming that gap is what the designation ask is for. It comes back, consolidated with the rest, at the close.





Section 8: Build ahead of demand: LEAD

This is the most concrete thing the day produced. Not a complaint, not a diagnosis, a delivery model. We're calling it LEAD, Logistics Electrification Ahead of Demand, and it answers the one question every grid argument eventually runs into: fine, but how do you actually pay for building the network before the trucks turn up.

Section 1 set the clock. The switch lands on a vehicle-refresh cycle, on economics the UK doesn't set, and it can arrive faster than a connection can be built to meet it. A distribution network voice put the network side of the same point plainly.

“When it does come, it'll be big. It could throw our predictions about the investment requirement out by an order of magnitude.”

If that's right, and the evidence in this report says it is, then waiting for the demand to prove itself before planning for it is the one strategy guaranteed to lose. The trouble is that building ahead has always foundered on the same rock.

“ There's a real catch-22. You invest too much in building out the grid to enable this to happen, and then it doesn't happen, and you didn't need to spend the money in the first place.

That is the tension. LEAD is the structure for resolving it, and it has three parts: model the clusters, designate the criteria, split the funding. One framing rule before the parts. LEAD is an aid to shared understanding between operators, networks and government, not a delivery masterplan. The energy constraint leads. The transport data serves it.

Start with the modelling, because it's the part nobody has done. Take one cluster, real or theoretical, a logistics-dense patch of the network where several operators sit close enough to share. Model its charging demand at five, ten and fifteen years out, with confidence bands. Put that to the operator and charge-point seats and surface the decision they face: invest now for five years of cover and wait for clarity, or go big up front because the economics are better once you commit. Run that process once, properly, then replicate it across DNOs through the ENA. One modelled cluster becomes a repeatable method. That's it. It isn't complicated. It has simply never been pointed at the grid.

Worth being precise about why it's never been done, because the gap is the opportunity. An analyst who has spent years on heavy-duty demand modelling has done HGV clustering analysis before, for hydrogen, and no client ever treated it as grid-relevant, because grid planning was built around substations, not duty cycles. The capability exists. It has just never been aimed at the network. So LEAD isn't asking anyone to invent a technique. It's asking them to turn an existing one to a job it was never set.

Which is also why we are not building this on Project Rapid, and the report should be blunt about that. Project Rapid, the £950 million Rapid Charging Fund, is the cautionary line in this story and nothing more. It issued no funding in nearly five years, was dropped in June 2025, and it died on commercial tension rather than a shortage of money: government wanted clawback if the capacity wasn't used for EV charging, the motorway service operators wouldn't take the strings, and nothing drew down, including through a £70 million pilot launched in December 2023 that closed without making an award. The lesson is durable and it's the only thing the report carries from it. A capital fund is necessary but not sufficient. Ahead-of-need only works if the delivery and procurement are de-risked at the same time as the money is found. What Project Rapid is not is a template for LEAD's modelling. It was motorway-only, with little interest in HGVs and nothing as involved as clustering or segmentation, so it proves nothing about the analytical core LEAD depends on. That makes LEAD a stronger story, not a weaker one. The clustering work is a genuine gap, not a re-run of something already proven. And its replacement shows the lesson was learned. Under the successor scheme now in consultation, government contracts with the connection providers directly rather than granting to service operators, and capacity that goes unused is released back to the market after a fixed period. That is the de-risked delivery model Project Rapid never had. It just isn't pointed at depots.

Now the analytical core, and the single most important honesty in the whole delivery case. The modelling answers two different questions, and they have two completely different levels of difficulty. The where is the easier half. ZEHID is already collecting duty-cycle, energy and charging-session data from the operators leading the switch, and route data gives a spatial picture of where charging load will cluster that is far better than the DNO's start-at-zero method of mapping fleet locations and assuming uptake over time. UKPN's Future Fleet project is doing exactly this on top of eFreight 2030. The where, in other words, is buildable now, with one honest limit: the trial data maps how early adopters run electric trucks, not how the diesel fleet runs today, because ZEHID collects no diesel baseline. It's the best spatial evidence anyone holds, and it's a lens on the leaders, not a census.

The when is not. The switching date, when each operator retires its diesels, is forward commercial intent. It sits in no telematics feed, because it hasn't happened yet, and it's the genuinely unsolved piece. The same analyst spent three years trying to sell bottom-up modelling to DNOs and NESO with no takers, and the wall was never data access. It was that nobody will commit to a switching date. So the report carries both halves and does not blur them: the where is buildable, the when is the ask, the thing the industry bodies have to land a position on. Implying that better data access solves the timeline is the single biggest credibility risk in this whole argument, and we don't make it.

A word on coverage, because the room reached for numbers that won't survive scrutiny. The instinct was to say the lead consortia represent some large percentage of UK artics, 14% rising to 30%. As vehicle counts those are too high and the people we most want to convince will mark them down on sight. The honest framing is a demand share, not a vehicle count. ZEHID is the highest-utilisation operators in the country, Maritime Transport container units, Royal Mail trunk legs, Amazon middle-mile, so their share of artics kilometres and charging energy

runs well above their share of vehicles. The clean statement is that a meaningful slice of UK artics charging demand already sits with operators inside the trials, and the artics skew is a strength for grid planning, not something to apologise for. What it isn't is a vehicle-count headline, and we don't print it as one.

Now the funding, where the April 2023 regime change does most of the work. Section 5 established that wider reinforcement is already socialised under the fully-shallow regime, so the operator's real bill is the sole-use last mile, not the whole estate. That splits LEAD's funding ask cleanly in two.



Phase one is the cluster modelling feeding strategic reinforcement a DNO can build ahead of need through its ED3 plans and the RESP process. Because that reinforcement is shared, not sole-use, phase one needs no new fund. It's a prioritisation-and-scheduling ask. This is where designation does its work, the criteria from section 7 deciding which clusters qualify. The mechanism is live. Ofgem's ED3 Sector Specific Methodology Decision, published 21 May 2026, makes NESO's transitional Regional Energy Strategic Plans a common planning input for every DNO and requires each one to publish a Build and Flex Strategy, setting out the triggers and decision criteria for when reinforcement proceeds ahead of need. It also ties funding to delivery: capacity that's paid for is either built or the money returns to consumers. That is Project Rapid's lesson written into the price control, and it cuts our way.

Phase two is the smaller, harder bit: a business case for a fund to cover the sole-use connections at depots and clusters that the socialised regime doesn't reach. The live candidate is the £400 million SR2025 allocation that replaced Project Rapid. Its first named scheme, the £190 million Strategic Charging Infrastructure scheme, went to consultation in June 2026 and is scoped to existing motorway service areas only, which leaves the case still to be made: widen the remainder toward off-SRN depots, or stand up a dedicated depot charging fund. And here the international contrast carries the argument, because the gap is a design choice with working alternatives in the field. Germany's per-point subsidies for commercial charging include grid connection costs. California's make-ready model puts the network-side cost on the utility, with over \$660 million earmarked specifically for medium and heavy-duty vehicles. The UK's £170 million Depot Charging Scheme explicitly excludes DNO works. Three countries, three choices. Ours is the outlier.

And the exclusion is only the start of the design. Under the scheme's own terms, grid capacity isn't just unfunded, it's the entry ticket: an applicant must evidence a live connection agreement or an accepted offer before it can apply for the charger money. The scheme funds the easy half and gates entry on the hard half. Then it tests the balance sheet. The grant is paid in arrears across three delivery milestones, and no milestone is paid until the operator has paid for that stage in full, with the last ten per cent held back until the site is energised and the vehicles are on the ground. Payments can take six weeks to clear once evidenced. So an operator fronts every pound, claims seventy per cent of it back, and waits. Its contract also requires the landlord's consent before works begin, which routes every leased depot straight back through the barrier section 5 costed. And the window that opened in March 2026 allocated its £28 million first come, first served, closing early if the money ran out. The operators who can carry all of that are the ones who least needed the help. The design isn't neutral. It selects for the balance sheets at the top.



Two things tell us the gap is real and not a TwentyForty invention. UKPN has confirmed appetite to lead a clustering initiative as a distinct next step beyond Future Fleet. And a second DNO, NGED, is standing up an industrial-cluster coordination innovation project aimed squarely at the first-mover problem: several customers each need more power, none will fund the upgrade first because the first to move pays and everyone else chips in afterwards, so nobody moves.

“ The first mover always loses. That’s why the consortium model keeps failing.

Two DNOs reaching independently for the same mechanism is the strongest evidence the cluster-coordination gap is real, named, and waiting for someone to build the method. LEAD is that method, and it sits on the seam section 6 described: the modelling only works if it can see the load it’s modelling, which is why the shared demand-data standard at the DNO/IDNO interface isn’t a side ask. It’s the input.

One counter the report has to answer, raised by a DNO and worth carrying because it’s the obvious objection. Government has justified motorway-service support as communal infrastructure for the whole economy, and if it starts picking off sectors, where does it stop. The answer isn’t special pleading. It’s coherence. The same government that has set phase-out dates for new diesel trucks and funds fleet electrification is the government whose energy plans set the strategic anchors. Recognising freight inside those plans doesn’t pick a sector. It removes an incoherence the government has already created itself.





Section 9: Mandate the offer

Ask a DNO what single change would help most, and the answer isn't a new fund or more metal. It's the connection rules. That's UKPN's own view, and it's worth more coming from the network than from anyone selling chargers, because the network has no product to push.

The rules are clean on paper. Shared-use assets are paid for by the DNO and socialised. Sole-use assets are paid for by the customer. Section 5 set out how that boundary works under the April 2023 fully-shallow regime, and we don't reopen it here. The problem is what happens at the exact sites this report cares about. A charging hub or a motorway service area, where one operator installs a megawatt of chargers and others charge by arrangement, breaks the clean line. You get grey areas across BSI standards, sub-metering and the charging rules, and no clean answer on who pays for what. UKPN's read is that the regime change didn't resolve this hub boundary, and that Ofgem doesn't fully grasp how much a flexible connection is worth to both the customer and the network. The fix it floated is case-study-led, pricing the social value in, rather than forcing hub and depot models through rules written for a binary world.

Underneath the charging-rules question sits the bigger prize, and it's the one ask in this report with a live window: make flexible and ramped connections the easy, fast, cheap default for depots, instead of an exception argued case by case.

Be precise here, because the room ran two things together and most of the industry does too.

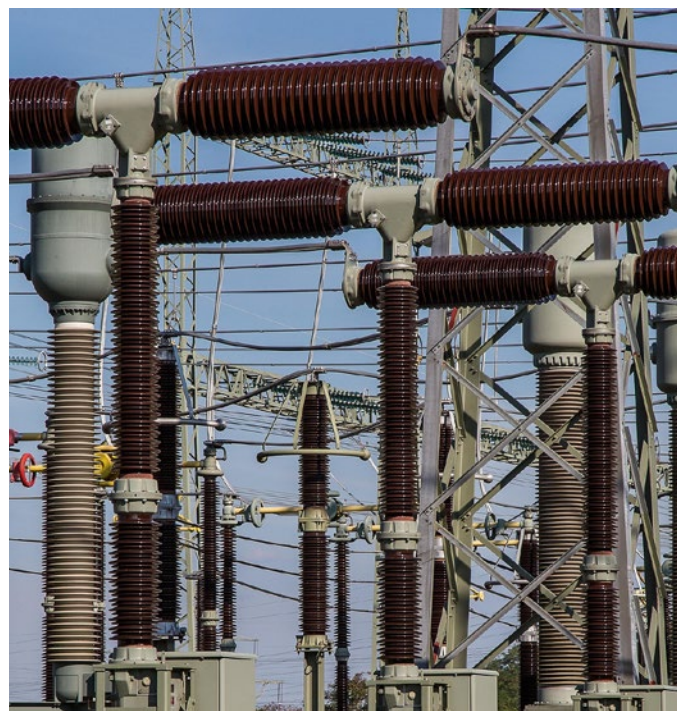
The thing you choose is the connection type: firm, or non-firm. A non-firm connection, now usually folded under “flexible”, is one the network can curtail, taken up front to cut cost and skip the wait for reinforcement. Active Network Management isn’t a third kind of connection. It’s the control system that does the curtailing, watching the constraint in real time and turning the connection down when the network is tight, which is why the common product is called a Flexible Connection (ANM). A flexible connection gets curtailed for one of two reasons: a fault or network works on a single-circuit supply, or active congestion management that lets a larger customer connect ahead of the reinforcement they’d otherwise wait for and accept curtailment at known busy times until it’s built. Either way you trade a bit of firmness for speed and cost. And a depot is close to the ideal candidate, for one simple reason: its load shape is the friendliest a network ever sees. Trucks charge overnight, when the network is quiet, on a duty cycle as far from speculative as demand gets. A ramped connection lets a depot energise in phases as it converts its fleet, rather than paying for full power on day one and sitting on it. A flexible connection slots the charging into the hours the network has to spare.

One honesty on curtailment, because it cuts the other way and a careful operator will raise it. Curtailment that’s genuinely intolerable is a curtailed connection that stops trucks charging against a fixed overnight window. For a fleet, that’s not a minor inconvenience, it’s vehicles that don’t run the next morning. So the lever isn’t “make everyone take a curtailable connection”. It’s “make the offer of a phased and flexible connection a default the operator can take where it works”, which for the overnight depot duty cycle is most of the time. The Netherlands shows what a real flexibility market looks like at scale: ATR85 contracts trade a guaranteed 85% availability for up to 50% off the tariff, and TenneT’s off-peak deals freed headroom equivalent to 9 GW, around 40% of Dutch peak demand. That’s the size of the prize when the products are standardised and the price signal is real.

Which is the sharper version of the ask, and it’s why it moves from aspiration to something enforceable. The Connect pillar of the reform already promotes wider use of flexible, ramped and phased connections. The non-firm option has been a requirement on DNOs since the April 2023 Access SCR wherever a firm connection would otherwise need reinforcement. So the gap isn’t permission. Permission exists. The gap is inconsistent practice across the fourteen DNO licence areas run by six network groups, and reinforcement costs front-loaded to a depot’s full eventual capacity even when the first phase doesn’t need it. That’s why the ask is to mandate the offer against a credible demand growth profile, not merely to promote it. “Promote the default” is aspirational and a network can ignore it. “Mandate the offer” is a thing a regulator can hold a DNO to.



It was built for a different purpose. Not fit for purpose for trucks. The biggest problem is there is no consistency.



The consistency point is the one operators feel most. Speak to five different people and you get five different responses, which is survivable for a single site and fatal for anyone trying to electrify a national network of depots on a common plan. Standardising the flexible-connection products across DNOs is a job for the ENA and Ofgem together, and it's the practical content of the ask.

This ask has a clock on it, and that's the caveat to hold rather than resolve. The Connect pillar's self-build and capacity measures are Ofgem's, and on 16 June 2026 it published an interim Connect update confirming it now plans to consult on them in the autumn, a slip from the early-summer window the April blog had signalled. As of late June 2026 the formal consultation has not launched. Treat the window as open at your peril until it actually opens, but be ready for it, because it's still the only one of the report's asks with a near-term home. The demand-side appetite that arms it lands at the close.

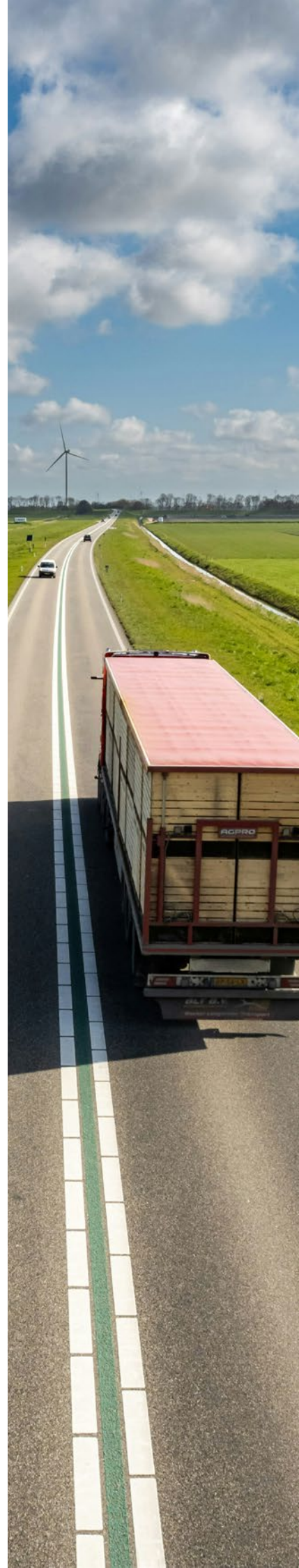
So much for the connection itself. The rest of this section is the levers that make a connection work harder once you have it, and the first job is to kill a fantasy.

Solar is oversold for truck charging, and the report should say so without hedging. The physics is wrong in three ways at once. PV peaks in the middle of the day and HGV charging peaks overnight. The seasonality runs the opposite way to demand. And the roof area you'd need for megawatt-scale numbers is enormous.

Do it where it pays for the warehouse. Don't expect it to move the fleet. The real behind-the-meter lever is storage sized to the duty cycle and the grid window, and the analogue worth drawing out is the London bus depot. At constrained sites, operators charge or hold a battery through the day, discharge it to support overnight fleet charging, and sell grid services in the daytime for revenue, which lets them avoid a costly connection upgrade. Said precisely, that's storage designed to task, plus daytime top-up where it genuinely happens, not buses trickle-charging all day. The distinction matters, because the loose version of the story has people believing a battery and some panels make the connection problem disappear.



Behind the meter doesn't fix the connection. It just hides it for a while.



That's the room's position, not a consultant's hedge. Storage buys time and shaves peaks. It doesn't conjure capacity that isn't there. The connection still has to be built.

But buying time is worth naming as a strategy, because sometimes time is exactly what's for sale. Where a site holds a connection offer with an energisation date years out, storage plus whatever constrained supply the site already has is the bridge across the gap section 1 measured: the first tranche of the fleet goes live during the wait instead of standing still through it. Pair it with a ramped connection and the two halves fit. The phased connection sets the destination, and the battery carries the load until each phase lands. That isn't storage instead of a connection. It's storage because the connection is coming and the trucks got there first. The distinction from the fantasy is the date. A bridge needs a far bank. Storage with a connection date is a bridge. Storage without one is a raft.

The last lever is the one that turns a constraint into an advantage, and it changes who's at the table. Trucks are unusually flexible demand. They're mobile, and a charging site really only needs hard standing, so they can slot into grid corners that a warehouse or a supermarket can't use, the bits of the network with spare capacity in the wrong place for fixed load. That mobility is why the obvious third party belongs in the room.

Operators and landlords are the two the sector knows. The third is the infrastructure investor, and HGV charging's siting flexibility is exactly what makes that role bankable: demand you can put where the power is, rather than power you have to drag to where the demand is fixed. Make the connection flexible, ramped and consistent, size the storage to the task, and put the demand where the grid has room, and the connection stops being the thing that kills the project.





Section 10: The residual

Even with every ask in this document granted, some depots will not get an economic connection. Ever. The genuinely stranded site, the isolated depot in a constrained part of the network with no neighbours to cluster with, routes onto shared and public infrastructure, consolidates onto fewer better-connected sites, or accepts that it lags. That's not the argument falling apart. That's the argument being honest, and the honesty is what makes the rest of it credible.

Section 2 set out how this would end, and this is where it's kept. Fix the mechanism and you do three things, not one. You unlock the subset of sites worth connecting. You identify the residual that won't connect on economic terms. And you route that residual somewhere real instead of pretending it away. A report that claimed the reforms connect every depot would be easy to dismiss, and rightly. The value of fixing the allocation, the pricing and the scheduling is precisely that it tells you which sites are which. You only have to model where to build if you can't build everywhere. So naming the residual is the load-bearing move, not the embarrassing one.

Which closes the question this whole report has held open and refused to resolve. How much fleet charging lands on depots, and how much on public and shared hubs. The answer is still a range, and we end where we began, deliberately, between UKPN's forecast that puts all of it on depots and DfT's that puts 92% on public. For an owner-occupier with a cheap connection and high charger use, depot wins. For a leased site with leased vehicles, an expensive connection and modest use, public wins, and that's where the room put the majority. The split is situational, the modelling is how you tell which side a given site falls, and the report does not resolve it depot-wards because the connection economics don't justify resolving it. Holding it open isn't fence-sitting. It's the only position the evidence supports.

The residual question has an equity edge the report should name rather than dodge, because who gets stranded isn't random. Current support is biased toward the easy wins. The EU put its first CO2 standards on the heaviest trucks, the over-16-tonne rigids and tractors that make up around 70% of HDV emissions, because that's where the carbon is. UK support has leaned the other way, toward the rigid and regional vehicles that go back to base every night. The effect is that the support mostly props up the larger corporate operators who'll manage the transition anyway, while the operators who find it hardest get the least help.

Bus has already run this tape. Britain's local bus fleet went from 10% to 16% battery-electric during 2025, and the growth sat with the big groups. Among the smaller operators, nearly a fifth of the market, electrification flatlined at 6%. That happened with ZEBRA money in the system and franchising pulling demand, neither of which HGV has. The analyst behind the data reads the barriers as commercial rather than technical: capital access, leased sites, grant complexity, management bandwidth. Every one of those is already in this report, wearing truck livery. The flat line is what the residual looks like when nobody routes it anywhere.



The top 10% will be able to afford the first wave of HGV infrastructure. What happens to the other 90%?

That question doesn't have a clean answer, and the report shouldn't pretend it does. But a prioritisation regime that recognises freight, a funding phase that reaches the sole-use last mile, and a flexible-connection default that lowers the bar to entry all bend the curve toward the operators who'd otherwise be left behind. The residual is real. The size of it is a policy choice.

One more equity point, smaller but worth engaging rather than ducking. A charging hub built for 44-tonne vehicles raises accessibility questions that the public chargepoint regulations and the PAS standard haven't grappled with. Kerbs and bollards heavy enough to stop an artic shape the whole site layout, and designing for both safety and disabled access at that scale is a genuine open problem. The sector's posture should be to engage DfT on it, not wait to be told. Get in front of it.

So, the asks. Three of them, plus one that sits on its own, and the order here is engagement order, when each has a live route, not a ranking of importance.

The connections ask comes first, because it's the only one with a home in the next few weeks. Mandate the offer of flexible and ramped connections for depot charging where the operator shows a credible demand growth profile. Section 9 built the case: the permission already exists, what's missing is consistent practice and a duty a regulator can enforce. Its window is the Connect pillar of Ofgem's demand-connections consultation, now planned for the autumn, and it's armed by the demand-side evidence.

Per NESO's Demand Queue Call for Input, 81% of respondents said they would accept a non-firm, ramped or phased connection in exchange for an earlier connection date. That's not operators being talked into flexibility. That's operators asking for it. The ask is to turn an offer they already want into one the network has to make.

The designation and proportionality asks are Phase 2 material, worked through the advisory groups now and into the later consultation, because firing the strategic-criteria argument into a data-centre-only Phase 1 window gets it read as off-scope.

The designation ask puts transport decarbonisation inside the strategic-alignment criteria, through the designated-plan route section 7 set out. This is a coherence argument, not a plea for favours, and it's the answer to the obvious objection that recognising freight means picking sectors until there's nothing left to pick. The same government whose Industrial Strategy and energy plans set the strategic anchors is the government that has set phase-out dates for new diesel trucks and funds fleet electrification. Leaving operators outside the connections priority isn't neutrality. It's an incoherence the government built itself, and recognising freight removes it.

The proportionality ask makes the reforms' Phase 2 proportionate for brownfield owner-occupier electrification. Section 5 set this up: the readiness bar built to deter speculative greenfield data-centre applications shouldn't fall with equal weight on a haulier electrifying a depot it has run for thirty years. Ofgem has committed to a proportionate approach at distribution, which is the cover for the ask.

Then the one that stands apart, because it's the single concrete legislative fix in this whole report that doesn't wait on any consultation outcome. Give commercial tenants a statutory right to install charging where they pay for it. Section 5 laid out why the lease is the barrier nobody costs, the five-to-fifteen-year terms running against twenty-five-year kit, the reinstatement clauses, the three-party substation consents. Energy UK has already published the recommendation to stop landlords refusing outright. The working model exists in California, where Civil Code section 1952.7 has given commercial tenants that right, subject to conditions, since 2015: the tenant pays, insures and installs to standard, and the landlord can't unreasonably refuse. It's drafted for wallboxes in car parks, with carve-outs below fifty parking spaces, so the UK shouldn't copy it. It should legislate the principle at fleet scale. Europe's residential side is already moving: Norway has given apartment residents a right to install since 2021, and France runs the same model. The commercial tenant is the gap everywhere except California. Britain's own Renters' Rights Act legislated a statutory request route for pets and nothing for charging, for homes or for depots. A commercial right to install wouldn't be catching up with anyone. In Europe, it would be first. This one lands with the transport and housing departments rather than the energy regulator, which widens the reach of what we're asking for and means it doesn't sit or fall with the Ofgem timetable.



Two things stay open. The designation route is live but pointed elsewhere: the first regulations under section 165A took effect on 30 March 2026, designating the Clean Power 2030 Action Plan, and no demand-side plan has followed. And the funding mechanism behind the phase-two case is consulting rather than settled: the £190 million Strategic Charging Infrastructure scheme, the first named scheme out of the £400 million that replaced Project Rapid, consulted until 28 July 2026 on a delivery model scoped to existing motorway service areas only. Open-access charging at motorway services, not the off-SRN depots where the problem sits. The mechanism is real and moving. It just isn't pointed at freight.

That's the whole of it. The switch is coming on economics the UK doesn't set.



The flip won't be sentimental. It'll be a date.

Section 1 opened on that and it's where the report closes. The date is set by vehicle costs the country doesn't control. The one variable the UK does control is whether the network is ready when it arrives. Right now it isn't, and the reason was never a shortage of metal. It's how the metal gets allocated, who gets to the front, and how long everyone else waits. Fix the mechanism and the buildable subset gets built, cheaper and sooner. The residual gets named and routed instead of stranded in silence. And the trucks that turn up on the next refresh cycle have somewhere to charge. That's the ask. It's not a new pot of money. It's a system that stops handing the scarce thing to whoever booked it first and starts handing it to whoever will use it.



What we're asking for

The connections ask

Mandate the offer of flexible and ramped connections for depot charging where the operator shows a credible demand growth profile.

This lands with Ofgem, and with the ENA on standardising it across DNOs so an operator running nationally meets one rule, not fourteen. The route is the Connect pillar of Ofgem's demand-connections consultation, now planned for the autumn, which is why this ask comes first: it's the only one with a window in sight. The permission already exists. What's missing is consistent practice and a duty a regulator can enforce. What arms it is the demand-side evidence: per NESO's Demand Queue Call for Input, 81% of respondents said they would accept a non-firm, ramped or phased connection in exchange for an earlier connection date.

The designation ask

Put transport decarbonisation inside the strategic-alignment criteria, through the designated-plan route.

This lands with DESNZ and DfT. DESNZ designates the plans and sets the criteria, with DNOs carrying the duty to have regard to them. It's worked through the advisory groups now, and into the later Phase 2 consultation. It does not go into the data-centre-only Phase 1 window, where it reads as off-scope. The same government whose Industrial Strategy and energy plans set the strategic anchors is the government that has set phase-out dates for new diesel trucks and funds fleet electrification. Leaving operators outside the connections priority isn't neutrality, it's an incoherence the government built itself. Recognising freight removes it.

The proportionality ask

Make the reforms' Phase 2 proportionate for brownfield owner-occupier electrification.

This lands with Ofgem, on its own commitment to a proportionate approach at distribution, which is the cover for the ask. The readiness bar was built to deter speculative greenfield data-centre applications. It shouldn't fall with equal weight on a haulier electrifying a depot it has run for thirty years. Phase 2 work, alongside the designation ask.

The lease ask

Give commercial tenants a statutory right to install charging where they pay for it.

This one stands apart because it's the single concrete legislative fix in this report that waits on no consultation outcome. It lands with DfT and MHCLG, not the energy regulator. The lease is the barrier nobody costs: five-to-fifteen-year terms running against twenty-five-year kit, reinstatement clauses, three-party substation consents. Energy UK has already published the recommendation to stop landlords refusing outright.

What's still open

Three kinds of open question, and they are not the same kind. One is genuinely unknown. One we are holding open on purpose. The rest are other people's timetables, with the status we last had.

The genuine unknown: the switching date

The where is buildable now. Route and duty-cycle data tells you where charging load will cluster, and that's a better spatial picture than the start-from-zero method the networks use today. The when is the unsolved piece. The date each operator retires its diesels is forward commercial intent, and it sits in no telematics feed. This is the sector's question to answer, not government's. It's the industry bodies and the Truck Infrastructure Group that need to land a position on a switching timeline the networks can plan against. Until they do, the planning case carries a hole no amount of data access closes.

The deliberate judgement, held open: depot versus public

How much fleet charging lands on depots and how much on public and shared hubs is a range, not a number, and the report ends where it began by leaving it that way. The honest position sits between UKPN's DFES, which models all of it on depots, and DfT's freight model, which puts 92% on public. The split is situational. An owner-occupier with a cheap connection and high charger use leans depot. A leased site with leased vehicles, an expensive connection and modest use leans public, and that's where the room put the majority. The modelling is the arbiter of which side a given site falls. We don't resolve it depot-wards, because the connection economics don't justify resolving it.

External dependencies

These are timetables we don't control. The asks rest on them moving, so we name them and date them rather than assume.

The section 165A route is live but pointed elsewhere. The first designating regulations were made on 4 March 2026 and took effect on 30 March, designating the Clean Power 2030 Action Plan, a generation plan that binds NESO and every DNO. No demand-side plan has been designated. The demand route is out to consultation as a published project list, with a sector-strategy model proposed for data centres only, and the government response was still unpublished in mid-July, past its own indicative twelve-week window. Whether any of it reaches transport is the open question, and it's the route the designation ask depends on.

The £400 million SR2025 allocation that replaced the Rapid Charging Fund has begun to land, and it confirms the gap. Its first named scheme, the £190 million Strategic Charging Infrastructure scheme, consulted until 28 July 2026 and is scoped to existing motorway service areas only: government strengthens the connection, then makes the capacity available to open-access charging at a subsidised rate. Off-network depots sit outside it. This is the funding behind the Phase 2 case, and the open consultation is the place to say so.

The demand-connections consultation has slipped. Ofgem's Connect update of 16 June 2026 confirmed it now plans to consult in the autumn on the Connect and self-build measures, back from the early-summer window it signalled in April. The window for the connections ask is real, but treat it as planned, not open, until it launches and the deadline is on the record.

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Special thanks to our wonderful hosts

Aon

The Amplify logo features the word "amplify" in a lowercase, sans-serif font. The "a" is blue, and the "m" is blue, while the rest of the letters are black.The Campbells Consultancy logo features the company name in a bold, sans-serif font. Above the text is a stylized graphic of a road or path leading towards a horizon. Below the name is the tagline "YOUR KEY TO THE COMMERCIAL VEHICLE INDUSTRY".The Shoosmiths logo features the company name in a bold, sans-serif font. The "S" is black, and the "H" is green, while the rest of the letters are black.The Voltempo logo features the company name in a bold, sans-serif font. The "V" is white, and the rest of the letters are blue.The Aegis Energy logo features a stylized, teal-colored graphic of two interlocking loops. Below the graphic is the company name "AEGIS ENERGY" in a bold, sans-serif font.The Portsmouth International Port logo features the company name in a bold, sans-serif font. Below the name is a stylized graphic of waves.The UK Power Networks logo features the company name in a bold, sans-serif font. To the right of the name is a stylized graphic of a sun or a series of curved lines. Below the name is the tagline "Delivering your electricity".The Paua logo features a stylized, pink-colored graphic of two arrows pointing right. To the right of the graphic is the company name "PAUA" in a bold, sans-serif font.The Neso logo features the company name "NEO" in a bold, sans-serif font. To the right of the name is a stylized graphic of a sun or a series of curved lines. Below the name is the tagline "National Energy System Operator".The Segro logo features the company name in a bold, sans-serif font. The "O" is red, and the rest of the letters are black.The Energy Systems Catapult logo features the company name in a bold, sans-serif font. The "C" is white, and the rest of the letters are pink. Below the name is the tagline "Energy Systems".The Welch Group logo features a stylized, blue-colored graphic of a circle with a white arrow pointing right. To the right of the graphic is the company name "WELCH GROUP" in a bold, sans-serif font.The npower logo features the company name in a bold, sans-serif font. The "n" is blue, and the "power" is black. The name is enclosed in a rounded rectangle.The Aon logo features the company name in a bold, sans-serif font. The letters are white, and the background is red.



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Ordered by first use in the report, deduplicated. Bracketed section numbers show where each source is cited.

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31. California Civil Code section 1952.7. Statutory right for commercial tenants to install EV charging where they pay for it. (§5, §10)
32. Renters' Rights Act 2025 (residential only). Created a statutory request route for pets, which a landlord cannot unreasonably refuse; created no route for charging, residential or commercial. (§5, §10)
33. Ofgem licence and price-control record on IDNOs. The standard distribution licence conditions applying to IDNOs (with the additional conditions sitting on DNOs from historic scale); the Relative Price Control (decision 176/05, July 2005) capping IDNO domestic charges at broadly host-DNO equivalence; the October 2023 IDNO open letter on non-domestic charges running through non-discrimination and a published charging methodology. (§6)
34. Ofgem RIIO-ED2 DSO framework and published DSO:DNO operational agreements. The required separation of the system-operator and network-owning functions, with the build-incentive conflict as the published rationale. (§6)

35. Clean Power 2030 Action Plan, designated by negative procedure (Hansard, Lords). The working precedent for criteria-based prioritisation: NESO and the DNOs prioritise connections against published technological and locational criteria, with no minister naming individual projects. Designated under SI 2026/223 (in force 30 March 2026.) (§7)
36. Public Accounts Committee, Fourteenth Report of Session 2024-25 (12 March 2025), with the cancellation reported by Transport and Energy (23 June 2025). The £950 million Rapid Charging Fund issued no funding in nearly five years and was dropped in June 2025, having died on commercial tension over clawback rather than a shortage of money, including through a £70 million pilot launched in December 2023 that closed without making an award. (§8)
37. Energy Systems Catapult toolkit (April 2026), with DfT VEH0521. 132,500 40-tonne-plus artic eHGVs by 2050; eFreight with 88 eHGVs across 33 locations; roughly 150,000 artic in the current fleet. Used for the coverage reframe: a demand share, not a vehicle count. (§8)
38. The £400 million SR2025 allocation that replaced the Rapid Charging Fund, and its first named scheme, the £190 million Strategic Charging Infrastructure scheme (consultation opened June 2026, closed 28 July 2026), scoped to existing motorway service areas: government contracts with connection providers to strengthen the network, then makes the capacity available to open-access charging at a subsidised rate, with unused capacity released to the wider market after a fixed reservation period. (Gov.uk, “Electric vehicles: strategic charging infrastructure scheme”). (§8, §10)
39. International funding comparators. Germany’s per-point subsidy for commercial charging includes grid connection costs; California’s make-ready model puts the network-side cost on the utility, with over \$660 million earmarked for medium and heavy-duty vehicles; the UK’s £170 million Depot Charging Scheme explicitly excludes DNO works. (§8)
40. Netherlands flexible-connection comparators. ATR85 contracts trade a guaranteed 85% availability for up to 50% off the tariff; TenneT’s off-peak deals freed headroom equivalent to about 9 GW, around 40% of Dutch peak demand. (§9)
41. The Connect pillar of the connections reform (flexible, ramped and phased connections, self-build) and the ENA queue milestones that already allow phased connections. The gap is inconsistent practice across the fourteen DNO licence areas run by six network groups, and front-loaded reinforcement costs, not permission. (§9)
42. Ofgem demand-connections consultation. Planned for early summer per Ofgem’s April 2026 blog; moved to an autumn consultation for the Connect and self-build measures per Ofgem’s Connect update of 16 June 2026; not launched as of late June 2026. The near-term home for the flexible-and-ramped ask. (§9, §10)
43. Storage-to-task evidence. London bus depots as the public analogue: National Express Yardley Wood running National Grid services by day and supporting depot charging at night, with National Express Coventry and First Bus Caledonia as further on-record cases; peak-shaving evidence (Brinkel et al.; Pathiranage; Decher and Schäfers). (§9)
44. Regulation (EU) 2019/1242. The first EU heavy-duty CO2 standards applied to the over-16-tonne rigids and tractors, around 70% of HDV emissions. The contrast with UK support leaning toward rigid and regional back-to-base vehicles is the report’s own reading, corroborated by the deployment skew and an anonymised analyst interview. (§10)