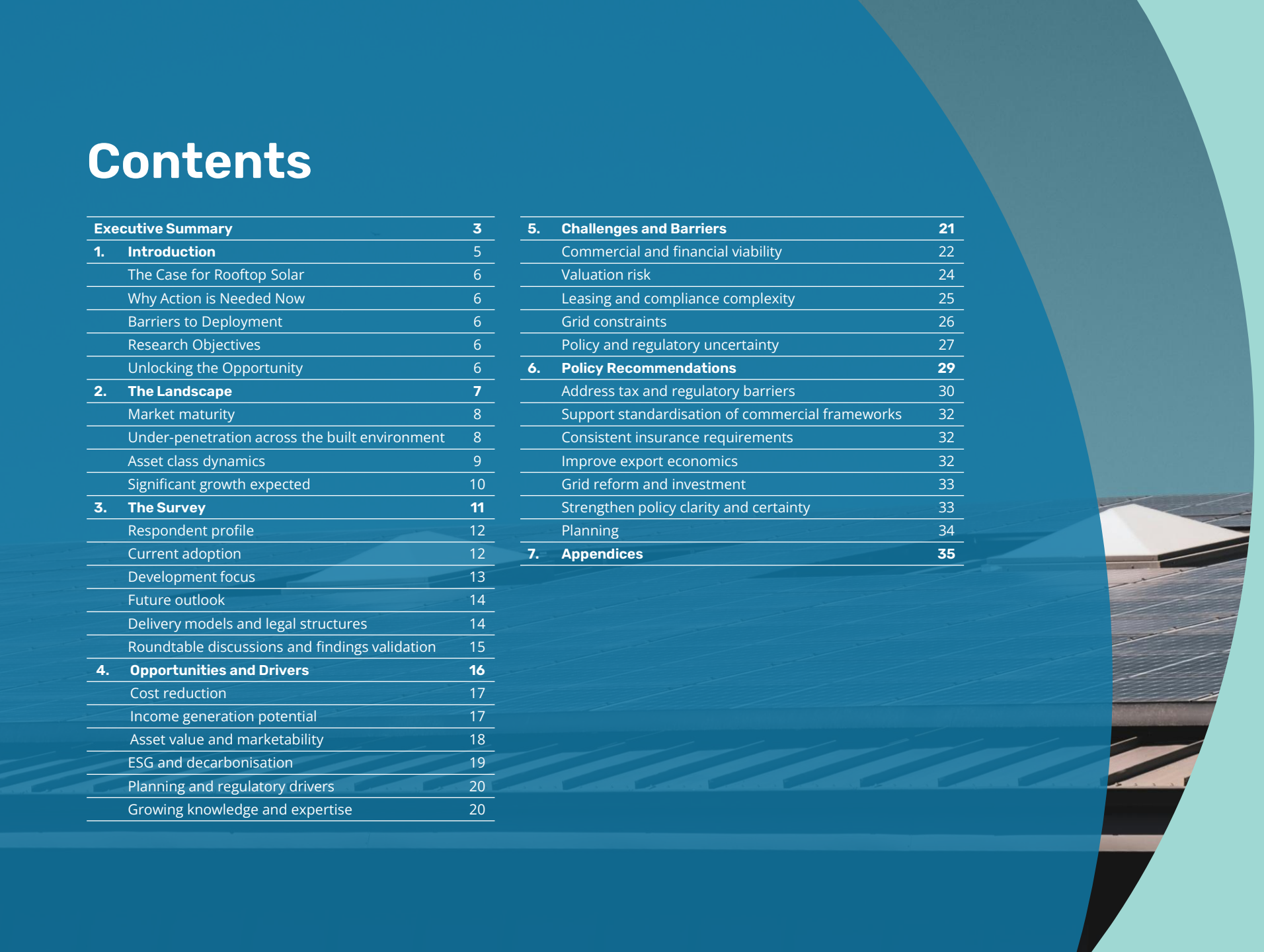
Real Estate:UK

From Opportunity To Infrastructure:

Scaling Rooftop Solar In Commercial Real Estate

CUSHMAN & WAKEFIELD

Contents



Contributors

Real Estate:UK would like to thank Forsters and Push Power for co-funding the research and providing valuable input and feedback. This work would not have been possible without their support.

Forsters

push POWER

Executive Summary

The research

This report presents the findings of research commissioned by Real Estate: UK, Forsters LLP, and Push Power to better understand the current state of rooftop solar PV deployment across the UK commercial real estate (CRE) sector. The research combines survey responses from **70** organisations representing over **£500bn** of real estate assets under management, targeted industry roundtable discussions, and supporting market analysis.

Together, these inputs provide a comprehensive view of current adoption levels, barriers to deployment, commercial considerations, and the actions industry participants believe are required to accelerate rooftop solar at scale.

70 organisations representing **£500bn+** of real estate assets participated

Solar goes mainstream

Rooftop solar PV deployment across UK commercial real estate is no longer an emerging concept but an established and growing component of asset strategy. The research shows that a significant number of major market participants are already engaged, with most reporting existing installations or operational systems. This reflects growing recognition and demonstrates that solar is increasingly viewed as a standard element of asset modernisation and decarbonisation rather than a niche innovation. However, despite this strong adoption base, the sector has not yet reached a point of frictionless scaling.

A 60GW opportunity

The market is best characterised as being in a transitional phase. While the technology itself is proven and widely accepted, deployment remains significantly below its technical potential, particularly in high-opportunity segments such as industrial and logistics. Estimates suggest that less than **10%** of suitable rooftop space in this sector has been utilised, with upwards of **60 gigawatts (GW)** of additional capacity remaining untapped across the UK CRE sector. Strong intent to deploy is often undermined by delivery constraints, meaning projects are delayed, downsized, or not pursued at all.

Over **90%** of suitable commercial rooftop space remains unused, leaving up to **60GW** of untapped potential

Why organisations are investing

Across the industry, the primary drivers for adoption are well established. Landlords and investors are motivated by a combination of energy cost reduction, asset decarbonisation, ESG compliance, and the potential to enhance asset value and marketability. Solar is increasingly viewed as a means of future-proofing assets against tightening regulation and tenant expectations. However, these benefits are not always easily captured in financial terms, which continues to limit the pace and scale of rollout.

What's holding the market back

A combination of structural barriers - including leasing complexity, grid constraints, policy and regulatory uncertainty, and inconsistent commercial frameworks - continues to prevent widespread, scalable deployment alongside viability constraints and stretched capex budgets. As a result, the market remains fragmented, with projects delivered on a case-by-case basis rather than through systematic portfolio strategies.

> What should be simple is, in practice, very difficult to implement.

The path forward

Looking forward, the sector anticipates continued growth, but without targeted intervention this is likely to remain incremental rather than transformational. The research therefore highlights a critical inflection point: unlocking the full potential of rooftop solar will require coordinated action to reduce complexity, improve investment conditions, and enable deployment at scale across the CRE sector.

Policy Recommendations

Given the challenges identified and the context for the purposes of collecting data the following recommendations are put forward.

1 Reform the REIT rules

Clarify the treatment of solar within the REIT rules and broaden the REIT regime to include renewable energy generation.

2 Address business rates and regulatory barriers

Extend the business rates exemption for solar panels beyond 2035. Introduce additional capital allowances reliefs and tax incentives such as a super deduction for solar arrays.

3 Standardise commercial frameworks

Encourage and support a move towards more standardised legal templates and lease clauses to reduce legal complexity and enable scalable deployment models.

4 Consistent insurance requirements

Work with insurers and regulators to introduce clear, consistent standards and requirements for solar rooftop projects allowing compliance to be assessed at the earliest stages of project development.

5 Improve export economics

Introduce a guaranteed, long-term export pricing mechanism, in line with our European competitors.

6 Grid reform and investment

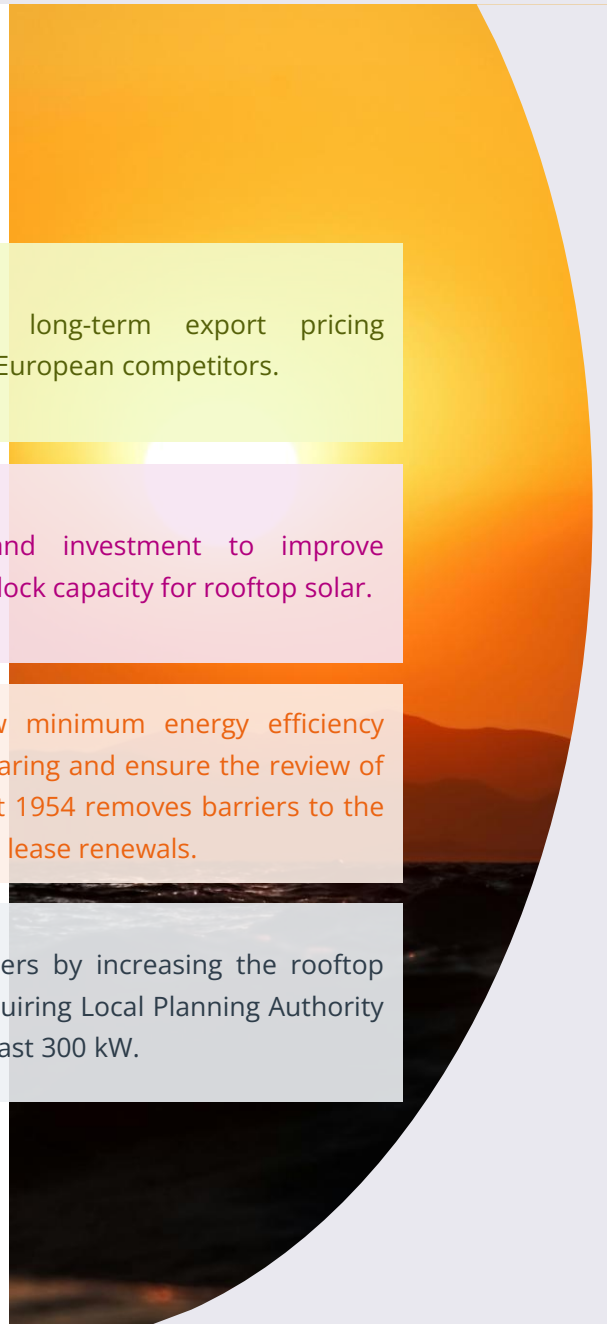
Accelerate grid reform and investment to improve connection timelines and unlock capacity for rooftop solar.

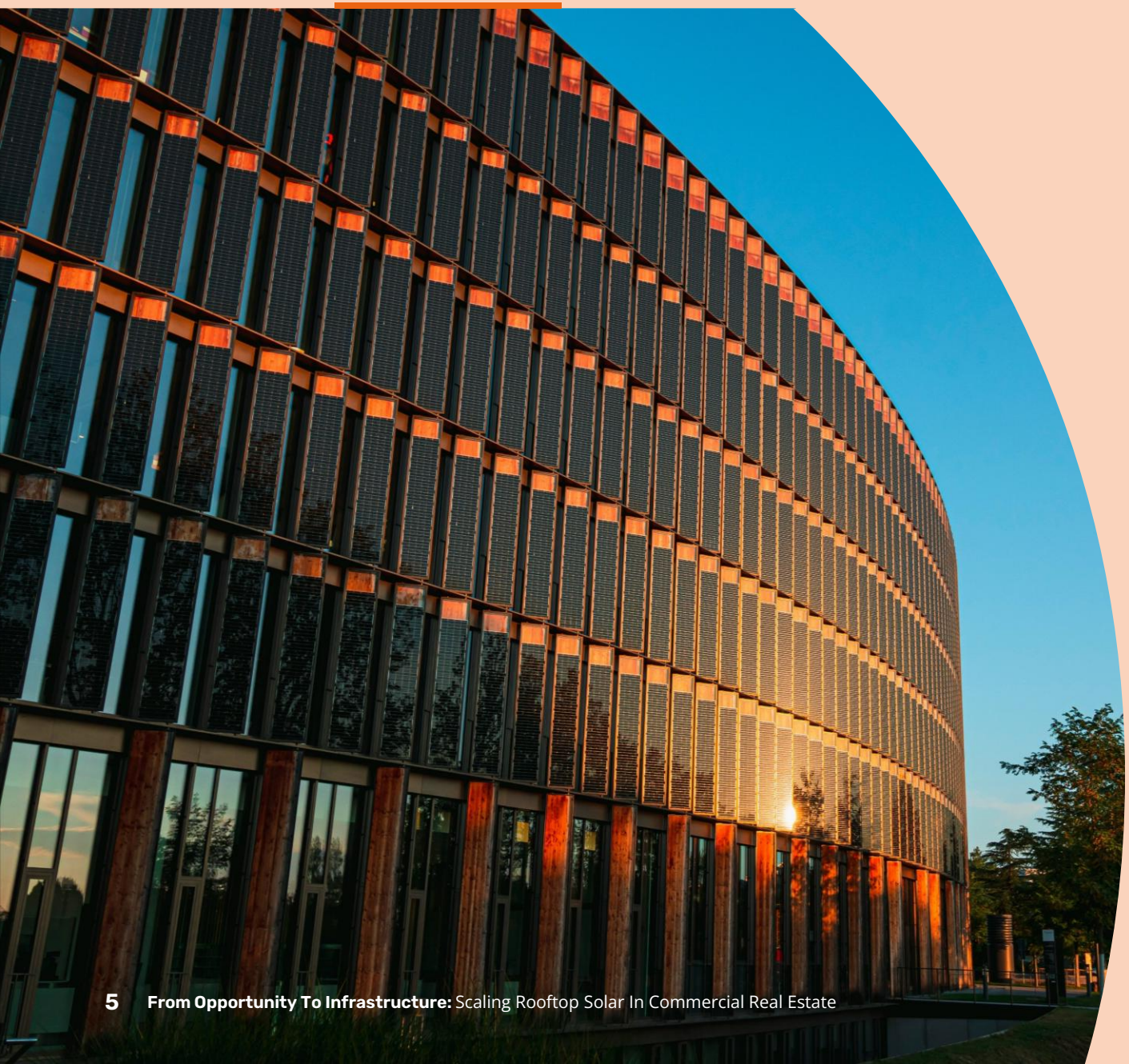
7 Strengthen policy clarity and mandates

Publish full details of new minimum energy efficiency standards, mandate data sharing and ensure the review of the Landlord and Tenant Act 1954 removes barriers to the installation of solar following lease renewals.

8 Streamline planning approvals

Reduce administrative barriers by increasing the rooftop solar planning threshold requiring Local Planning Authority approval from 50 kW to at least 300 kW.





01

Introduction

1. Introduction

The case for rooftop solar

The decarbonisation of the UK built environment has become a central priority for both government and industry, with the commercial real estate (CRE) sector playing a critical role in achieving national net zero targets. Commercial buildings are currently believed to account for **23%** of the built environment's operational carbon emissions[1], and improving energy performance across existing and new assets is a key lever for reducing this impact. Within this context, rooftop solar PV represents one of the most accessible, scalable, and cost-effective technologies available to landlords and occupiers seeking to reduce emissions and energy costs.

Why action is needed now

At the same time, the operating environment for the CRE sector is evolving rapidly. Rising electricity prices, increasing occupier demand for low carbon space, and tightening regulatory requirements, such as minimum energy efficiency standards (MEES) and broader ESG reporting expectations, are placing growing pressure on asset owners to proactively manage energy consumption and carbon performance. Rooftop solar offers a practical means of addressing these challenges by enabling on-site generation, reducing exposure to grid price volatility, and supporting compliance with emerging sustainability frameworks.

Barriers to deployment

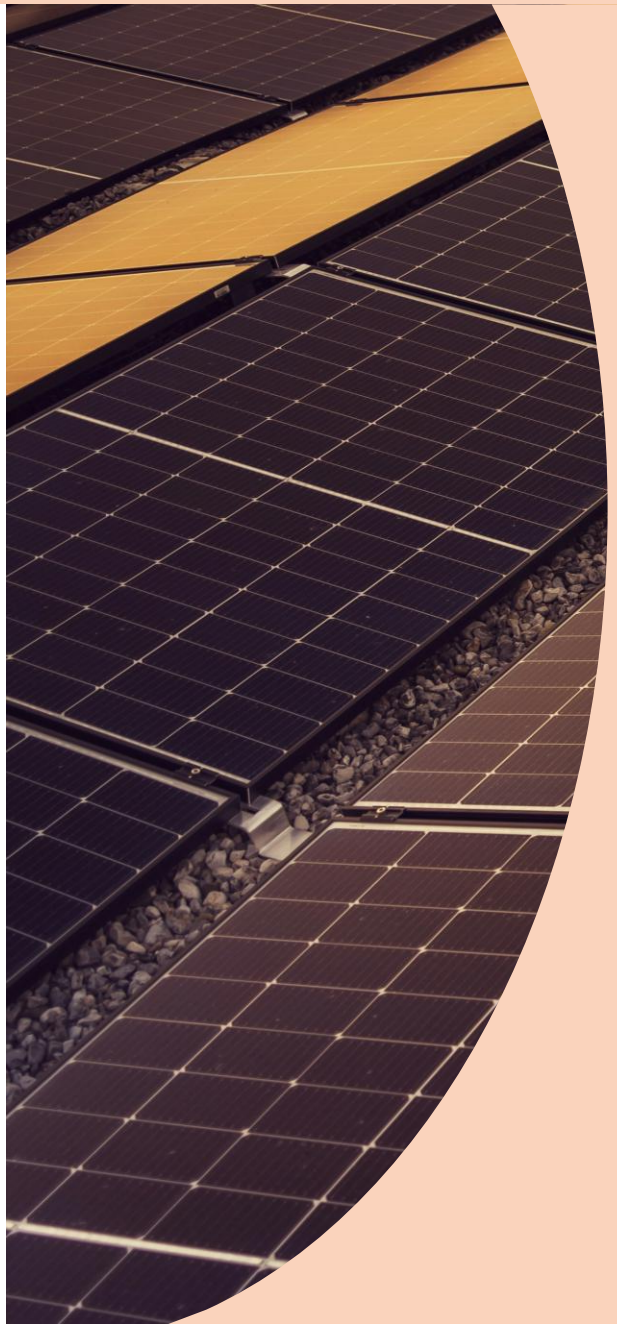
Despite this strong strategic alignment, the deployment of rooftop solar across the CRE sector has been inconsistent, with significant untapped potential remaining across portfolios. Barriers such as split incentives between landlords and tenants, structural and design constraints, leasing complexities, and uncertainty around grid connections and export arrangements have limited widespread adoption. In parallel, there is a lack of standardised understanding across the market regarding the technical feasibility, commercial structures, and financial returns associated with rooftop solar installations.

Research objectives

In response, Real Estate: UK, together with Forsters LLP and Push Power, commissioned Cushman & Wakefield to complete this research and provide greater clarity on the opportunity for rooftop solar within the CRE sector. The research combines a survey of RE:UK members and wider market participants, industry roundtable discussions, desk-based research, and expert market insight to build a comprehensive picture of the current state of rooftop solar deployment across UK commercial real estate. The objective is to quantify the scale of the opportunity, identify key barriers to deployment, and set out practical pathways to accelerate adoption across the market.

Unlocking the opportunity

Beyond supporting decarbonisation, rooftop solar also has an increasingly important role to play in strengthening the UK's energy resilience and security, helping reduce reliance on imported fuels, support a more decentralised energy system, and unlock the potential of commercial buildings to act as energy-generating infrastructure. By doing so, this work aims to support landlords, investors, and occupiers in making informed decisions and to help unlock the full potential of rooftop solar as a core component of the sector's transition to a low carbon future.



[1] UKGBC Building The Case For Net Zero: Retrofitting Retail & Logistics Buildings, available from: https://ukgbc.org/resources/building-the-case-for-net-zero-retrofitting-retail-and-logistics-buildings/

02

The Landscape

2. The Landscape

Market maturity

The UK commercial real estate market for rooftop solar is transitioning from early adoption into a phase of wider integration, but it remains highly fragmented in how it delivers projects. Although solar is now widely recognised as a viable and desirable addition to assets, there is still no consistent approach to implementation across portfolios. Instead, projects tend to be delivered on a case-by-case basis, shaped by individual lease structures, asset characteristics, and stakeholder preferences.

This lack of standardisation creates inefficiency across the market. Each project often requires bespoke legal, commercial, and technical structuring, which increases transaction costs and slows deployment. As a result, even organisations that are committed to scaling solar across their portfolios struggle to move at pace. The industry is therefore at a point where maturity in intent has not yet translated into maturity in delivery systems.

Under-penetration across the built environment

Whilst there is significant potential for rooftop solar PV to support decarbonisation of the built environment, under-penetration of rooftop solar across the UK commercial real estate sector reflects a fundamental mismatch between technical potential and actual deployment. Despite strong economics and growing ESG pressure, only a small proportion of viable rooftop space has been utilised.

Whilst determining the exact scale of current rooftop solar is difficult, current forecasts estimate between **3-5 GW** of rooftop solar have been installed across the UK CRE sector (of a total UK capacity of **21.5 GW**[2]).

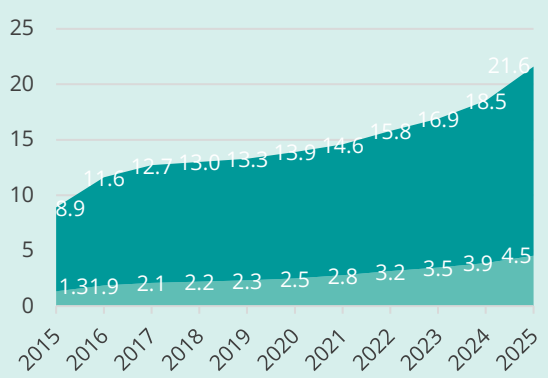


Figure 1: Table showing UK solar PV capacity, broken down into total installations and commercial installations

This stark under-utilisation is particularly evident in high-potential segments such as industrial and logistics, where expansive, near-flat roofs are ideally suited for PV yet remain largely undeveloped, with less than **10%** of available roof area being utilised for solar.

The scale of the untapped opportunity is significant. UK commercial buildings collectively host enough suitable roof area to support tens of gigawatts of solar capacity[3], potentially contributing a meaningful share of national decarbonisation targets. Crucially, even partial utilisation of this capacity could materially reduce grid demand and energy costs for occupiers.

To give perspective on the scale of opportunity across the CRE space, official statistics from the Valuation Office Agency report a total rateable floorspace across England and Wales of **648 million square metres**[4]. From this we can estimate useable area for solar PV and an associated total rooftop solar potential, with these totals shown in **Table 1**.

> The opportunity is colossal and this will only strengthen.

Table 1: Total potential rooftop solar PV capacity across asset classes

Asset Class	Total Floorspace (m2)	Estimated Useable Area (m2)	Total Potential (GW)
Logistics and Industrial	410M	200-240M	47 GW
Offices	80M	10-15M	3 GW
Retail Warehouses	25M	15-25M	4 GW
Shopping Centres	20M	8-15M	2 GW
Other	57M	15-25M	4 GW
Total	**592M**	**248M-320M**	**60 GW**

This under-deployment is not driven by weak fundamentals but by structural barriers. Split incentives between landlords and tenants, grid connection constraints, capital allocation priorities, and complexity in multi-let assets all slow adoption. As a result, rollout remains fragmented and opportunistic rather than systematic.

Looking ahead, this under-penetration represents a major opportunity. As regulatory pressure intensifies and energy strategies evolve, commercial rooftops are increasingly viewed not as passive assets, but as scalable, income-generating infrastructure with significant strategic value.

[2] DESNZ Energy Trends: UK Renewables
[3] DESNZ Solar Roadmap 2025 (found here: DESNZ_UK_Solar_Roadmap_final) & C&W Solar Solutions (found here: https://www.cushmanwakefield.com/en/united-kingdom/insights/solar-solutions)
[4] Valuation Office Agency Official Statistics Non-domestic Rating: Business Floorspace Statistical Commentary

Ground-mount solar PV and solar carports

Whilst this research has focused primarily on rooftop solar PV, other forms of solar are also applicable within the commercial real estate (CRE) sector - predominantly ground mounted solar and solar carports. These technologies tend to be more site-specific and niche than rooftop systems, typically deployed where assets have underutilised land or where occupiers are highly energy intensive and rooftop arrays alone make only a limited contribution to overall energy demand.

Ground mounted solar is particularly suited to rural or out-of-town locations, such as industrial estates, business parks, and science or research campuses. These assets are often situated in lower density environments with significant surrounding land, which may be unsuitable for development due to planning constraints, but can provide an opportunity for additional on-site generation.

However, while ground mounted solar can increase generation capacity, it can also require dedicating land that may have a higher alternative use value. In addition, such schemes are typically subject to greater scrutiny from local planning authorities, as permitted development rights are limited and larger installations generally require full planning consent.

Solar carports are best suited to assets such as retail schemes, out of town offices, hospitals, and industrial settings where there is both high energy demand, extensive parking provision, and a significant number of commuters. In addition to generating electricity, carports offer the opportunity to integrate EV charging infrastructure and provide weather protection for vehicles, enhancing both occupier and visitor experience.

The principal constraint for solar carports is capital cost. While PV modules and electrical infrastructure are broadly comparable to rooftop systems, carports require substantial structural steel and foundations. Car parks are often constructed on “made ground”, where underlying soil conditions can be variable due to backfill from adjacent development. This typically necessitates more detailed ground investigations and engineering design, which can significantly increase development costs.

Survey respondents were broadly supportive of proposals to introduce mandatory solar canopies on larger commercial car parks, in a similar fashion to recent French legislation, recognising their potential to unlock additional generation capacity while supporting EV charging. However, many noted that any future requirement would need to reflect the significantly higher costs and technical complexity associated with solar carports compared with rooftop systems.

Asset class dynamics

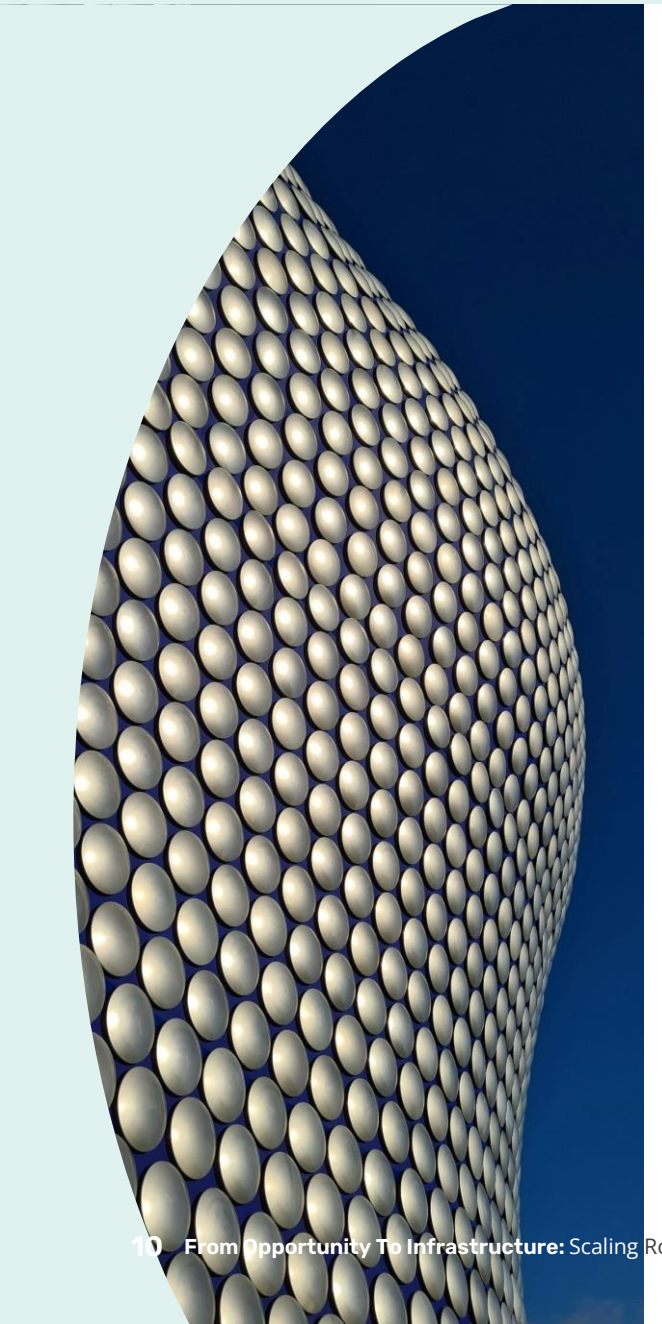
Adoption of rooftop solar varies significantly by asset class, reflecting differences in physical characteristics, energy demand, and leasing structures.

Industrial and logistics (I&L) assets are clearly the leading segment, with around **40%** of respondents to our survey prioritising them for solar deployment.

These assets benefit from large, unobstructed roof spaces and relatively straightforward ownership structures, making them highly suitable for solar installation.

> Industrial and logistics assets lead deployment, while lease structures remain a key determinant of solar viability

Retail assets present contrasting viability, with our research focusing on two asset sub-classes; **shopping centres** and **retail warehousing**. These contrasts predominantly relate to lease types and areas under control. Shopping centres typically benefit from landlord-controlled common areas and electricity supplies, making solar deployment more straightforward, whereas retail warehouses are often let on FRI leases with roofs and utilities under tenant control, creating additional delivery and commercial complexity.



In a similar vein to warehousing, shopping centres also characterise excellent opportunities for rooftop solar, perhaps representative of the top asset class for solar PV at a site level. Shopping centres typically use high amounts of electricity during daytime hours, with roof areas under landlord control, and electricity to internal units sold via the service charge through only a handful of points of connection to the electrical grid. Large roof areas and large consumptions combined with minimal legal amendments tend to result in projects which can move faster than those tied to FRI assets and normally come with the highest return on investment for the landlord or investor.

On the other hand, retail warehousing presents more complex challenges than shopping centres. Whilst retail warehousing assets will have overall roof areas in line with those of I&L and shopping centre assets, these roofs are more often than not demised to a large number of individual tenants under their FRI leases. Smaller individual plot sizes coupled with multiple tenants and an array of leasing terms present deployment issues. These differences present significant hurdles to the structuring of commercially viable solutions and typically lead to reduced economies of scale at construction stage. Outside of the commercials, the need to vary a large number of multiple leases can increase legal costs and negotiations beyond reasonable expected timeframes.

Offices face physical constraints such as competing roof uses for plant and amenities, and an overall smaller available roof size. However, as with shopping centres, landlords often retain the roof rights and responsibility for energy procurement which can mean shorter and less complicated programmes, as there are no significant amendments required to leases.

Alternative asset classes such as data centres and life sciences facilities offer strong theoretical potential due to high energy demand, but can be constrained by infrastructure complexity and a perceived risk of reduced energy consumption in the future.

Whilst solar PV arrays may be sized correctly to the assets current electricity consumption, there are often concerns from landlords that the tenant may vacate and the array will be oversized for the future tenants' needs, thus offering lower returns than expected. This can mean smaller arrays are installed to cover off this risk, but leads to an undersized solar PV system, its potential for carbon reduction hindered.

Overall, the landscape is highly uneven, with I&L assets acting as the primary engine of growth while other sectors lag behind due to limitations inherent to each asset class. However, of an estimated **60 GW** of rooftop potential across UK assets, best estimates show only **3-4 GW** of solar PV have been installed. With this figure in mind, it's believed that less than **10%** of I&L rooftops in the UK have any solar PV installed.

Significant growth expected

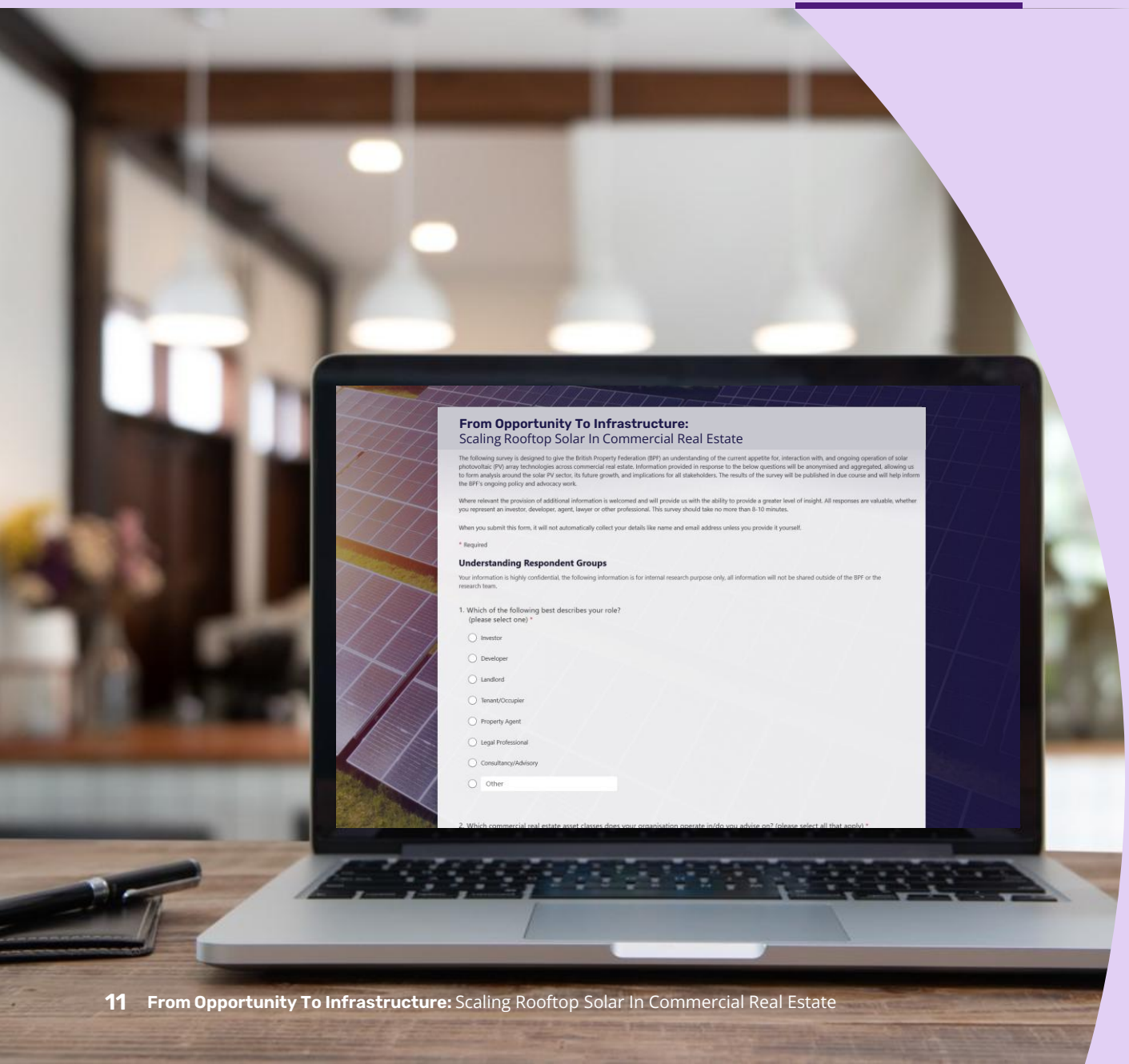
At a national level, the UK government has set highly ambitious deployment targets[5], aiming to increase total solar capacity from circa **21–22 GW** today to **45–47 GW by 2030** and up to **70 GW by 2035**.

A substantial share of this expansion is expected to come from rooftops, with policymakers explicitly calling for a "rooftop revolution" across commercial, industrial, and public sector buildings. This embeds rooftop PV as a core pillar of the energy transition, rather than a niche add-on.

Growth is likely to accelerate as rooftop solar shifts from optional to standard asset infrastructure. Rising and volatile electricity prices combined with projected increases in electricity demand, are pushing occupiers to secure onsite generation. Combined with expected tightening of regulations this means landlords increasingly need solar to maintain asset compliance and competitiveness.

Over **90%** of suitable commercial rooftop space remains unused, leaving up to **60GW** of untapped potential

[5] DESNZ UK Solar Roadmap



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The Survey

3. The Survey

This survey captures the views of commercial real estate stakeholders on the current adoption of rooftop solar, the barriers to wider deployment, and the opportunities to accelerate growth across the sector. The findings have informed the conclusions and recommendations set out in this report.

Respondent profile

The survey draws on a broad cross-section of Real Estate: UK members and the wider commercial real estate sector, with **70** respondents spanning landlords, investors, developers, tenants, and consultants. Half of respondents were investors and landlords, providing a strong representation of capital owners and institutional investors across the real estate sector. The respondents within this cohort represented some of the largest holders or asset managers of UK real estate, with **over £500bn of combined assets under management** in real estate holdings. Of the other **50%**, professional services and developers made up the majority of the responses.

This distribution ensures that the findings reflect both strategic and operational perspectives, capturing how solar PV is viewed across the entire delivery chain. However, we recognise that the number of total responses represent a relatively small proportion of the entire CRE sector, and have supplemented the survey results with desk research and drawn on our extensive knowledge of the market.

Current adoption

Adoption of solar PV is now firmly established across the sector, with findings indicating that it has become a core component of an asset's ESG strategy for many organisations. This is supported by survey data reinforcing the conclusion that solar is no longer a future-facing technology but a mainstream solution.

68% of respondents either have already installed solar PV or are actively pursuing solar PV across their portfolio

The results also point to a strong pipeline of future activity, suggesting readiness for further scale-up across the sector. Evidence from the survey supports this, with all but **1** respondent reporting that they are currently assessing or progressing installations. This level of engagement underscores the sector's capacity to expand deployment, provided that key barriers can be addressed.

Whilst on the face of it respondents were overwhelmingly optimistic, we need to be cognisant that those who responded are more likely to engage in surveys around solar and its rollout than some other players in the CRE sector who may not be as engaged. Given there are still such a large number of suitable assets without solar PV installed, it's highly likely that overall adoption levels are lower across the CRE spectrum than our survey suggests.

Development focus

The survey suggests that our respondents are deploying solar across a range of asset lifecycle stages, including new developments **(73%)**, refurbishments **(71%)**, and occupied assets **(54%)**. The relatively even distribution and deployment across these categories reflects the versatility of solar PV, which can be integrated both at the point of construction, retrospectively as part of other works, or as a standalone installation.

Installing solar PV as part of a new development or refurbishment can improve project viability by allowing site setup, scaffolding and other construction costs to be shared across the wider programme of works. In contrast, these overheads can account for **5-15%** of the cost of a standalone solar PV installation, making retrofit projects comparatively more expensive on a like-for-like basis.

The appointment of a wider project management team can help to reduce this cost at design and pre-construction stages, whilst the likes of welfare facilities and scaffolding required for wider building works often lead to lower capex spends on the solar PV elements.

However, whilst these projects can be easier to progress technically and can be less capex intensive, understanding future tenant energy consumption and associated usage profile can present difficulties sizing systems correctly. This difficulty presents itself as an additional risk at design stage to landlords and investors who wish to decarbonise their assets. They can find it difficult to rationalise the solar PV array size and associated capital expenditure against the potential risk an underperforming system will have on the assets returns.

> The viability of solar, beyond a small token system, is driven by the underlying user.

In comparison to new developments and refurbishments, installing solar PV on existing, occupied assets presents a host of different challenges. At design stage the system size and forecast returns can be easier to calculate as tenants' energy consumption can be readily available. However, installing systems around existing tenant's operations and negotiating commercial arrangements provide additional complexity. Capital expense will often be higher as these projects are predominantly standalone and require dedicated project management teams alongside the invariably higher costs per kilowatt peak (kWp) that come with smaller projects.

These challenges make the reasonably high prioritisation of occupied assets by respondents surprising until we consider the wider ESG and EPC targets. Without significant retrofit deployment overall decarbonisation targets are unlikely to be hit within their expected timeframes and many landlords and investors may be left with underperforming and stranded assets that do not meet regulatory minimums or the demands of tenants and stakeholders.

Future outlook

With the sustained increase in energy prices over the last four to five years[6] and the continued view that risk will remain elevated in the short to medium term[7], it's understandable that the outlook for solar PV in commercial real estate is overwhelmingly positive, with **85%** of respondents expecting a small to large increase in installation activity. **54%** of investors and landlords anticipate at least a small to moderate increase in deployment over the next two years, with a further **31%** expecting significant growth.

This suggests a stable but cautious trajectory, where organisations are committed to expanding solar deployment but remain constrained by a range of challenges. The absence of any expectation of decline reflects strong underlying confidence in the role of solar within CRE portfolios.

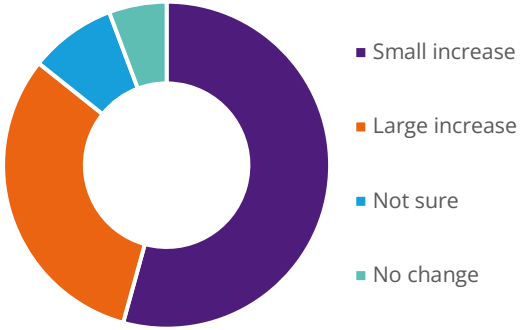


Figure 2: Respondent's views on their expected activity in relation to solar PV over the next 24 months

Delivery models and legal structures

The market is currently characterised by a diversity of delivery models, including PPAs, B-rent structures, and free-energy arrangements. To date, it's believed that the PPA model has emerged as dominant, with **76%** of respondents to our survey utilising PPAs. However, the legal complexities and time it takes to come to an agreement between solar PV owners/generators and the associated offtakers can hinder project delivery. It is not uncommon for a viable scheme to falter and stop as a result of lengthy negotiations sapping the goodwill of both parties. This is especially the case for smaller solar PV arrays where the perceived benefits were not initially large to begin with.

Stemming from the PPA legal structure, the B-rent model has more recently come to the fore as a potential solution. The B-rent model offers a simpler, faster negotiation with fewer legal complexities and lower operation and maintenance costs, as a result of operational responsibilities being handed to the tenant, who will be responsible for maintenance of the PVs alongside existing FRI covenants under their lease. In comparison to PPAs, B-rent figures are generally fixed irrespective of onsite consumption which means proving the B-rent model will result in 'value' for the tenant can initially be more time intensive. As with any delivery model, each approach has its own advantages and limitations.

Looking ahead, landlords and investors were fairly evenly split on which delivery model is likely to dominate in the coming years, with **47%** identifying PPAs and **23%** identifying B-rent structures as the most likely route to market. This suggests there is a strong role for both models, with a presumption that large-scale arrays may favour the PPA's and B-rent agreements becoming more commonplace for smaller arrays.

PPAs dominate today, but simpler delivery models and funding structures are needed to accelerate deployment at scale.

There was however, a clear expectation that solar PV systems would predominantly be landlord-owned (**71%** of all respondents believe rooftop PV arrays will be landlord-owned), which given historic trends in the industry, is reasonable to assume will remain the case for the foreseeable future. On average, self-funded tenant installations do not offer payback periods that meet investment expectations unless energy consumption is very high and arrays are large enough to take into account economies of scale. For example, tenants will often require payback periods of less than **4-5 years** where landlords may be in a position to make longer term investment decisions.

If neither the tenant nor the landlord can justify the upfront costs of a solar PV installation, third party funding presents a different model to explore, with little to no capital outlay for owners or occupiers.

These funding streams are often tied to PPAs between the funder and energy user, with lower costs of energy tied to longer agreement periods and asset management and maintenance completed by a solar PV specialist.

Whilst there are many positives to the third party funded options, difficulties most often arise around lease lengths and minimum consumption clauses. Third party funders will generally seek a **15-year** minimum term, with **25-year** agreements not uncommon. This contrasts with current trends for shorter (**5–10 year**) lease lengths between landlords and tenants.

Similarly, systems are sized to a site's energy consumption at a point in time, and if the energy consumed drops below a defined percentage, financial penalties may occur, reducing potential savings (and presenting a financial concern for potential assignees of those leases). Between longer PPA terms and minimum consumption clauses, these can sometimes prove too great a risk to overcome.

[6] Office for National Statistics: The impact of higher energy costs on UK businesses: 2021 to 2024
[7] House of Commons Library: Gas and electricity prices during the 'energy crisis' and beyond

Roundtable discussions and findings validation

To complement the survey findings, a targeted industry roundtable was convened to validate the research outputs and provide additional qualitative insight and nuance into some of the results. The session brought together a representative cross-section of stakeholders from across the commercial real estate value chain, including landlords, investors, developers, and professional advisors. This ensured that both strategic and delivery level perspectives were captured, enabling a more comprehensive understanding of how rooftop solar PV is currently being deployed in practice.

Solar Funding Models at a Glance

The UK CRE market has developed a range of commercial models to support rooftop solar deployment, each offering a different balance of ownership, risk, complexity and financial return. Understanding the key characteristics of these structures is essential when determining the most appropriate route for a particular asset, landlord and occupier.

Power Purchase Agreements (PPAs)

A PPA operates in a similar way to a conventional energy supply agreement. A third-party funder, often referred to as the generator, finances, owns, operates and maintains the solar PV system, while the building occupier or energy user (the offtaker) agrees to purchase the electricity generated by the system at a predetermined rate for a fixed period, typically **10–25 years**. PPAs can remove the need for upfront capital investment and operational responsibility from both landlords and tenants, making them an attractive route for deploying larger solar installations.

B-rent

Under a B-rent arrangement, the landlord funds and owns the solar PV installation and recovers the upfront capital cost through a fixed annual charge paid by the tenant over an agreed period. This charge is typically structured to be lower than the anticipated energy cost savings delivered by the system, allowing tenants to benefit financially while avoiding upfront expenditure. Agreements can be implemented through a lease variation, rental uplift, side letter or similar mechanism and may also be referred to as a **Solar Infrastructure Charge** or **PV Recovery Fee**. The model is generally simpler to administer than a PPA and can reduce ongoing legal and operational complexity.

Free-energy arrangement

Free-energy arrangements are most commonly used for smaller rooftop solar installations. Either the landlord or tenant funds and owns the system, with both the installation and ongoing maintenance incorporated into the lease structure. Tenants receive the benefit of the electricity generated without paying an additional fixed charge specifically linked to the solar asset. While the landlord may not receive a direct financial return from the energy generated, the arrangement can improve asset attractiveness, support leasing activity, enhance tenant satisfaction and contribute to wider ESG and decarbonisation objectives.

04

Opportunities and Drivers

4. Opportunities and Drivers

Cost reduction

Reducing onsite energy costs was the single most important driver of solar adoption across all stakeholder groups, with energy costs cited as a top motivator for **64%** of all respondents to our survey. This is unsurprising given the UK has experienced sustained high and volatile electricity prices since late **2021**, driven by gas market exposure, geopolitical shocks, and structural supply constraints. These escalated energy prices and the associated increased volatility has led to the transition of energy costs from a simple pass-through figure to a not inconsiderable risk factor in tenant's strategic decisions. Energy cost management is now a critical priority for both landlords and tenants, with rooftop solar offering a direct way to reduce operational electricity costs and risk of exposure to grid electricity price fluctuation.

For tenants, the ability to access lower-cost energy is a clear and immediate benefit, while for landlords, it enhances the attractiveness of their assets and supports tenant retention. This alignment of interests makes cost reduction a powerful and enduring driver of deployment.

Income generation potential

In addition to cost savings, solar PV offers the generator or PV system owner the potential to generate additional income, either through direct sale of energy to tenants or through exported energy to the grid. Whilst survey respondents saw this as a secondary driver in comparison to the reduction in onsite energy costs, **31%** of all respondents believed it presented an opportunity to obtain a return on investment and give investment in renewables and decarbonisation an equal footing in comparison with other capex intensive projects.

As landlords and investors will only have a finite reserve of capital available, ensuring there is a minimum return for investment allows asset and fund managers to allocate larger sums to rooftop solar than they otherwise previously would have. This represents a significant opportunity if the right commercial frameworks and leasing structure can be established. Whilst the UK previously had a feed-in tariff subsidy, this was closed to new applicants in **2019**. Other European nations such as the Netherlands, Germany, and France still offer subsidies and feed-in tariffs. Whilst these schemes may not be lucrative investments, they offer investors and landlords comfort that a minimum return on investment will be achieved over a longer-term period (often between **15-20 years**). With this comfort, investors are more willing to fund larger installations with greater decarbonisation effects.

Unlocking this potential depends on finding the right balance between energy pricing to derive an income in comparison to onsite savings. Too low an energy price results in commercially unviable projects, whereas too high an energy price offers a tenant little to no savings, resulting in little to no prospects of the tenant signing up.

Energy cost reduction remains the strongest driver of rooftop solar adoption, supported by growing interest in investment returns.

How have subsidies impacted solar PV rollout in other European countries?

Across the CRE sector, feed in tariffs (FiTs) and similar subsidies or incentives in countries like Germany, France and the Netherlands have effectively provided stable, long-term income streams. By guaranteeing a fixed price for exported electricity over longer terms, these schemes reduce revenue uncertainty and make rooftop solar investments on commercial assets more bankable and attractive to landlords, tenants, and third-party investors.

Whilst often not offering large incentives, these nations have driven predictable cashflows and yield performance, giving confidence to investors and landlords when making investment decisions.

Standardised tariffs, clear grid access rules, and legal obligations on utilities to purchase power make it straightforward to integrate solar into existing assets, whether through landlord-led investments or PPA structures. This ease of deployment enabled widespread adoption of rooftop solar across offices, warehouses, and retail assets, with Germany currently having an estimated **29 GW**[7] of commercial rooftop solar PV, a significant uplift on the UK's **3-5 GW**.

Finally, in a CRE context, it can be surmised that FiTs have helped unlock scale across large property portfolios, which often drives down installation costs, improving returns over time. By providing consistent incentives, these policies supported supply chain growth and economies of scale, making solar increasingly viable even without subsidies.

Where schemes are already deemed viable, the subsidy will often allow funders to pursue larger systems affecting a marked improvement to an asset's sustainability criteria than would have been possible without long term guarantees of income. Combined with supportive policy frameworks, this allowed solar to become embedded within asset strategies, contributing not just to decarbonisation targets but also to income generation and asset value enhancement across the built environment.

Compared with other markets, UK export PPAs do not guarantee consistent returns because they rely on variable market prices rather than fixed, long-term tariffs. Payments are typically linked to wholesale electricity prices, which fluctuate significantly, and solar generation often coincides with lower-price periods. Combined with intermittent generation and potential export constraints, this means revenues are inherently uncertain and can vary over time, unlike the stable income provided under subsidy-based schemes.

Asset value and marketability

The integration of solar PV can enhance both the financial and non-financial value of commercial assets. By reducing operating costs and improving environmental performance, solar can make properties more attractive to tenants and investors.

In a market where ESG performance is increasingly linked to asset quality, the presence of a meaningful solar PV array is becoming a differentiator. It signals that an asset is future-ready and aligned with evolving market expectations, which can support both leasing performance and long-term value.

From a valuation perspective, installation of a solar PV array has the potential to positively affect an asset's value as a direct result of the additional revenue streams and income it can generate (e.g via PPA or B-rent leasing models). Increasing capital valuation of an asset was cited by **13%** of all respondents as a top motivator to adopt solar PV.

Whilst this understanding of solar PV valuation has been widely understood for large ground-mounted arrays and solar farms for some time, knowledge of this element from a valuations perspective on rooftop solar is improving in the commercial real estate sector.

The recently updated ESG and sustainability in commercial valuation standard published by the RICS makes specific reference to the correct valuation approach to rooftop solar PV installations. A standardised and predictable valuation methodology for rooftop solar is going to be critical for landlords trying to understand the capitalised impact of investments in PV assets.

[7] As reported by the German Solar Association (BSW-Solar), based on BNetzA data

ESG and decarbonisation

Whilst solar PV primarily offsets **Scope 2 emissions** through on-site generation (rather than an outright reduction in operational carbon), solar PV plays a central role in helping organisations meet their ESG and decarbonisation targets. **47%** of all survey respondents said that decarbonising business operations was a key driver in the adoption of solar PV and **45%** said compliance with organisational ESG targets was a major driver. As pressure increases from regulators, investors, and customers, the ability to demonstrate progress toward net zero has become a key strategic priority.

Rooftop solar is particularly attractive because it delivers measurable emissions reductions, provides economic benefits, while also making use of underutilised rooftops. This threefold value proposition makes it a cornerstone of sustainability strategies across the sector, reinforcing its importance in future asset planning.

In comparison to other ESG improvements, rooftop solar can often represent the most cost-effective and easy to implement method of decarbonising an asset and improving an asset's EPC rating.

Decarbonisation through the installation of air source heat pumps (ASHPs) or improved insulation can offer a bigger overall decrease in carbon emissions, but may not have a payback period within the improvements lifetime whereas the payback period for solar PV is typically between **5 – 10 years** depending on delivery model and when the system is installed.

Similarly, when an asset is occupied it can be difficult to implement many ESG improvements without major disruption. Whilst some element of disruption is always expected, rooftop solar's impact on a site's operation during construction is deemed minimal.

Contrary to this, retrofitting the likes of ASHPs can be operationally sensitive as it often requires the wholesale removal of a building's heating or cooling primary plant and secondary distribution systems. This low level of disruption favours rooftop solar implementation over other decarbonisation technologies.

15% of the roof area can deliver enough solar generation to offset

50% of a typical ambient warehouse's annual electricity use.

Planning and regulatory drivers

Planning requirements and regulatory standards are an important driver of solar deployment, particularly for new developments. Our survey results indicate that in many cases, developers are installing PV primarily to meet planning conditions, environmental regulations, or achieve sustainability certifications such as BREEAM. All developers who responded noted these elements within their **top 3** motivators for solar PV adoption, and this represented **31%** of all respondents' top motivators.

This indicates that policy is already playing a role in driving adoption, but also highlights the importance of maintaining and strengthening these requirements to ensure consistent and further rollout across the sector.

Whilst full planning consent is still required for the installation of solar PV on listed assets or assets within conservation areas, there is no longer a limit to the size or scale of solar PV array that can be installed on a rooftop within England or Wales. Prior to **2024**, the General Permitted Development Order (GPDO) limited Permitted Development with Prior Approval applications for solar PV schemes to **1MW**. The removal of this limitation has given confidence to investors that larger projects will not either be held up by perceived red tape or face additional costs for surveys and reports.

There is a similar story with grid reform in more recent times. Until **May of 2026**, any solar PV grid connection in England or Wales of **1MW** and above required not just an assessment by the local grid operator/ Distribution Network Operator (DNO), but also an additional Transmission Impact Assessment by the National Grid. This was not only costly but often resulted in significant delays of **10 years** or more being added to installation times, with some connection dates as far away as **2035** or **2037**.

In May, this process was streamlined, with **CMP446** lifting the threshold from **1MW** to **5MW** alongside the instigation of additional, common-sense hurdles such as OFGEM's Connection Reform which effectively removed a large number of 'zombie' applications from the queue.

Although not being implemented until **March 2027**, the government has seen to include solar PV within the latest iteration of building regulations, within the recently published Future Buildings Standards (FBS).

Solar PV may have been installed to meet UK Building Regulations (Part L) in the past, it was not explicitly required. With the forthcoming Future Buildings Standard (FBS) regulations, solar PV is expected to become a requirement within law. Whilst the Future Buildings Standard update to Building Regulations is still to be approved, it is assumed that the notional non-domestic building will include solar PV equivalent to **40%** of the building's foundation area. As such, any new build will be expected to meet or beat this minimum to be compliant, unless an asset specific exemption is received.

Growing knowledge and expertise

The solar PV industry is no longer in its infancy and is still evolving but one element that did not stand out as a major challenge within our survey was a lack of expertise or concerns around procurement. Only **17%** of respondents believed that 'a general lack of expertise' represented a primary technical challenge.

If this survey had been conducted only a few years ago, we believe knowledge gaps would have featured more highly in respondents lists of issues. This suggests the solar PV industry is no longer constrained by foundational knowledge gaps, but is instead entering a phase of more confident, scalable delivery, albeit with a number of challenges still to be overcome.

05

Challenges and Barriers

5. Challenges and Barriers

Commercial and financial viability

Financial viability remains one of the most persistent constraints on rooftop solar PV deployment in the UK commercial real estate (CRE) sector. While the underlying economics of solar have improved significantly over the past decade, many projects still struggle to deliver returns that meet investor expectations, particularly when assessed against competing capital allocation opportunities.

> The opportunity is colossal and this will only strengthen as battery technology advances. However, the current state of play puts all of the risk on the landlords and the returns are simply not worth the initial investment.

A central challenge is the high upfront cost required for installation. Even where economies of scale exist, rooftop systems can involve substantial costs related not just to equipment, but to associated structural assessments, project management, and lengthy legal negotiations. Of those surveyed, **49%** believed financing installations was one of the primary challenges preventing widespread adoption of solar PV.

These costs are often higher on a per kilowatt-peak (kWp) basis for smaller or more complex assets, eroding potential returns. At the same time, revenue streams remain relatively constrained, typically limited to savings on imported electricity, income from on-site energy sales (e.g. via PPAs or B-rent), and modest export revenues.

This imbalance between cost and income leads to extended payback periods, often exceeding the thresholds deemed acceptable by landlords, investors, or occupiers. In many cases, investors are seeking returns within shorter time horizons, making solar PV less attractive when compared to alternative uses of capital.

Revenue uncertainty further compounds the issue when future electricity prices, tenant demand and occupancy levels are taken into account. This introduces a degree of risk that is often difficult to quantify or hedge against. Similarly, export revenues in the UK remain relatively low and inconsistent, limiting the ability to rely on surplus generation as a meaningful income stream.

In addition, misalignment between lease terms and system lifespans creates further financial friction. Solar assets typically operate over **25-30 years**, while commercial leases are often much shorter (**5–10 years**). This mismatch introduces uncertainty around long-term revenue continuity and can deter both landlords and third-party investors.

Capex and returns for a typical rooftop solar PV array

The table below presents indicative costs, savings, and returns for a typical **300 kWp** rooftop solar PV array, assuming that **85%** of the electricity generated is consumed onsite.

The capital cost and energy output assumptions remain consistent across both scenarios referred to below, namely where the PV array is funded by the landlord or the tenant. However, there are significant differences in the financial returns and payback periods depending on the funding structure.

Where a tenant has the available capital to invest directly in the solar PV system, they are able to retain the full value of the electricity cost savings. Under this model, the payback period is approximately **5.5 years**, with a **Year 1 yield** of around **20%.**

Where the system is funded by the landlord, a return on investment is typically required to justify the capital expenditure. In this scenario, the financial benefits are generally shared between the landlord and tenant through an agreed commercial arrangement, such as a B-rent structure or onsite power purchase agreement (PPA). While this approach removes the tenant's upfront capital requirement, the sharing of benefits can result in longer investment payback periods, under the model below, approximately 8 years. Whilst the tenant-funded model delivers the strongest direct financial return, many occupiers are unable or unwilling to allocate capital to solar PV projects. Investment in operational activities, business growth initiatives, and other competing capital priorities often takes precedence, particularly where the remaining lease term is shorter than the anticipated asset payback period.

Landlords may take a longer-term view of the investment. Whilst the financial payback is typically longer, the wider benefits of improved EPC performance, portfolio decarbonisation, enhanced asset attractiveness, and potential valuation uplift can strengthen the investment case. Nevertheless, challenges can remain where lease terms, income recovery mechanisms, and investment payback periods are not aligned, potentially making internal investment approval more difficult to secure.

	Tenant Funded Array	Landlord Funded Array
System Size (kWp)	300 kWp	300 kWp
System Output (kWh)	255 MWh	255 MWh
Carbon Savings (CO2e)	53 Tonnes	53 Tonnes
CAPEX (£)	£250k	£250k
Tenant Net Income/Savings (£)	£50k	£18k
Landlord Net Income/Savings (£)	£0k	£30k
Year 1 Net Yield (%)	20%	12%
Payback Period (Yrs)	5.5 Yrs	8.0 Yrs
25 Yr IRR (%)	19%	13%

Valuation risk

A further critical issue noted in the survey was the valuation of solar PV installed across CRE assets, which remains inconsistent and, in many cases, poorly understood.

> Valuation approaches to solar income streams can differ greatly, which creates uncertainty for parties looking to invest.

While rooftop solar can generate income and reduce operating costs, there is currently no universally adopted methodology for incorporating these benefits into asset valuations. As a result, some valuers treat solar income conservatively, exclude it entirely, or may be heavily discounted due to perceived risk.

37% of respondents believed inconsistency in valuation represented a primary regulatory challenge

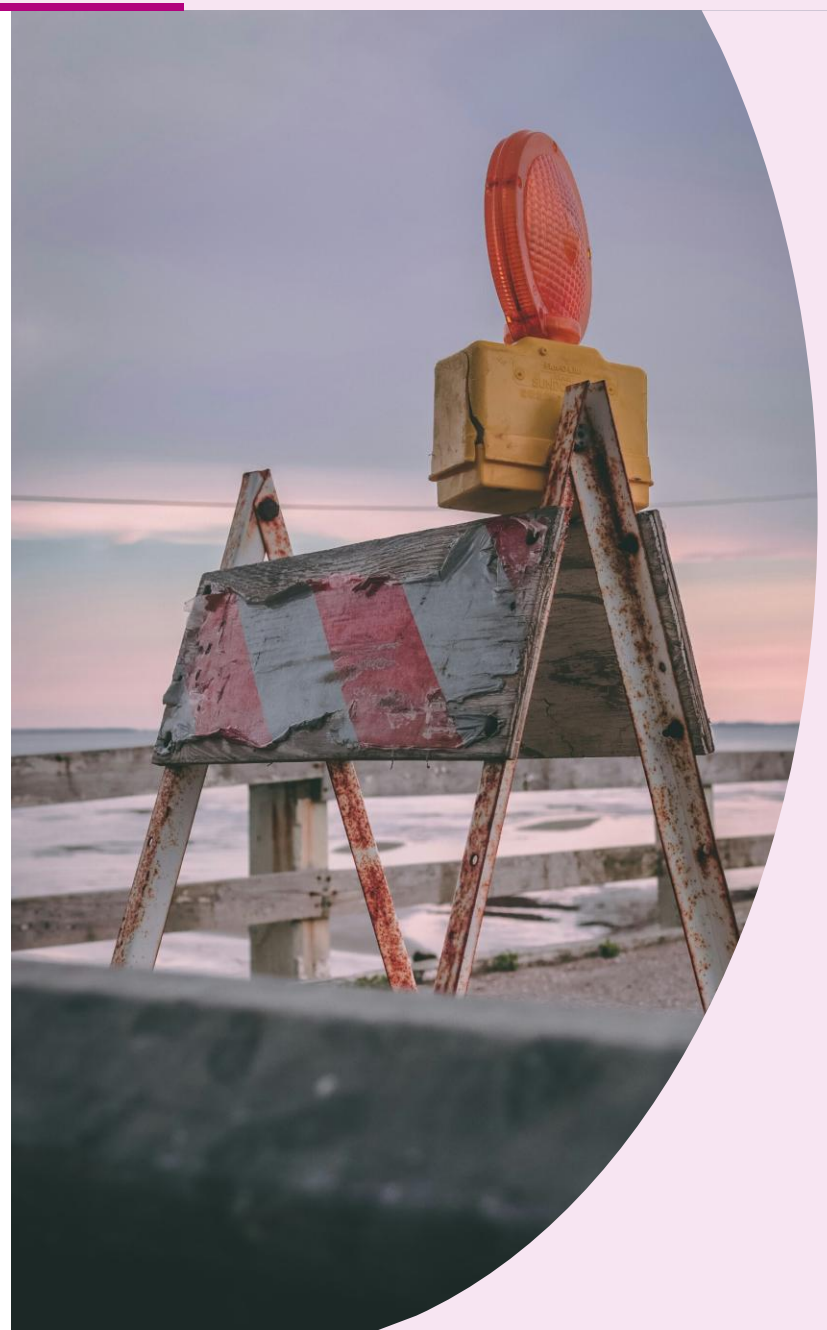
This lack of clarity means that the perceived value of solar installations often falls short of investor expectations, particularly when compared to the upfront capital required. Landlords may therefore be reluctant to invest where the impact on asset value is uncertain or not fully recognised at exit.

The absence of consistent guidance, despite emerging frameworks such as RICS sustainability valuation standards[9], continues to create ambiguity. Investors may question whether forecast returns will be realised in practice, particularly if income streams are not fully reflected in valuations or if market sentiment shifts.

Taken together, these factors create a challenging investment case: high initial costs, relatively modest and uncertain revenues, long payback periods, and unclear valuation treatment. In a competitive capital environment, this combination can lead to hesitation or deprioritisation of solar projects, despite their clear strategic and environmental benefits.

> Another barrier is the absence of an industry-standard approach to valuing solar PV within commercial real estate... Establishing a standardised framework for valuing PV, aligned with existing valuation standards and lease structures, would allow the commercial real estate sector to better recognise the long-term value created by on-site solar generation.

[9] RICS: ESG and sustainability in commercial property valuation, available from: https://www.rics.org/profession-standards/rics-standards-and-guidance/sector-standards/valuation-standards/esg-and-sustainability-in-commercial-property-valuation



Leasing and compliance complexity

Leasing complexity emerged as one of the most frequently cited barriers in the survey. Non-standardised PPAs and solar lease structures were identified by **46%** of respondents as a leading regulatory challenge, while standardised leasing and ownership agreements were the most frequently cited improvement that would accelerate deployment across the sector.

PPAs, for example, introduce a multi-layered contractual relationship between the system owner (often the landlord or a third-party investor) and the energy offtaker (typically the tenant), which must sit alongside and interact with existing lease agreements.

> PPAs are too complex and too lengthy to agree in commercial timescales.

Aligning these structures can be both time-consuming and legally intricate. The challenges are amplified when expanding this structure to multi-tenant environments such as retail parks. Differing lease terms, expiry dates, energy consumption profiles, and risk tolerances often require bespoke drafting. This significantly increases legal costs and lengthens transaction timelines, sometimes to the point where projects become commercially unviable.

Traditional lease structures, such as Full Repairing and Insuring (FRI) leases, often create friction. FRI leases often place responsibility for utilities and building elements – such as the roof - with the tenant, whereas rooftop solar typically requires landlord involvement and long-term infrastructure commitments.

The absence of standardised documentation or widely accepted market frameworks further exacerbates these issues. There is currently no "off-the-shelf" PPA or lease integration model for CRE rooftop solar. As a result, each project effectively starts from scratch, requiring legal teams to structure agreements on a case-by-case basis. This lack of consistency increases both perceived and real risk for landlords, tenants, and funders and certainly hampers speedy deployment, when investor returns can be materially impacted by deployment before versus after the spring/summer seasons.

Alongside the complexities associated with legal arrangements, insurance requirements can vary significantly between providers.

The solar industry has generally recognised design guidance for insurability, most notably *RC62: Recommendations for fire safety with photovoltaic panel installations*[9]. This document was developed by the RISCAuthority and published by the Fire Protection Association (FPA) to promote best practice standards.

However, despite being produced with input from insurers, there is no consistent interpretation of these guidelines across the market. Many insurers apply their own requirements and constraints regarding how solar PV arrays are designed and installed, particularly in relation to clearance distances and safe zones around rooftop features such as rooflights. In many cases, insurers' own guidance does not explicitly define minimum clearances, instead assessing each project on a case-by-case basis.

As a result, required separation distances can vary considerably between insurers. In some instances, these requirements can significantly reduce the available roof area for solar PV, potentially to the extent that a scheme becomes commercially unviable or impractical to install.

Overall, leasing and compliance complexity not only increases costs but also slows decision-making and reduces scalability across portfolios. Without greater standardisation and clearer frameworks, these barriers will continue to limit the pace at which solar PV can be deployed at scale within the commercial real estate sector.

[9] RC62 Recommendations for fire safety with PV panel installations, available from: https://mcscertified.com/?standard=rc62-recommendations-for-fire-safety-with-pv-panel-installations

Why is the grid so constrained?

Grid constraints exist largely because the electricity system was designed for a very different type of generation. Historically, power came from large, centralised plants that produced steady, predictable output, with electricity flowing in one direction to consumers. This made it relatively easy for the local and national grid operators, Distribution Network Operator (DNO)/ Transmission System Operator (TSO), to balance supply and demand and maintain a stable network.

Today, the system is becoming far more decentralised, with generation spread across thousands of smaller sources such as rooftop solar, wind turbines, or energy storage facilities. This means that buildings are no longer just consumers but potential generators, often producing variable output that depends on weather and time of day. As a result, electricity flows are less predictable and can even reverse direction, creating challenges for voltage control and system stability.

The grid infrastructure was not built for this level of complexity, so local networks can quickly become constrained. In practice, this means new connections are harder to secure, with the additional upgrades or controls needed often coming with significant costs. Grid constraints therefore reflect the transition from a centralised, stable system to a distributed, dynamic one that is still catching up in terms of infrastructure and management

Grid constraints

Grid capacity and connection delays remain a key barrier to solar deployment, with grid connectivity identified as one of the largest technical challenges in the survey, representing the primary technical challenge for **50%** of all respondents. This is particularly evident for larger rooftop systems that rely on exporting surplus electricity. While smaller, self-consumption-led installations can often proceed with minimal export capacity requirements, projects that seek to maximise roof coverage or generate export revenue are more likely to encounter capacity limitations and lengthy connection timelines. Grid constraints are increasingly the primary limiting factor for larger-scale deployment, rather than technical or economic feasibility.

> Grid capacity is an additional barrier, investing in the grid needs to be faster than current progress.

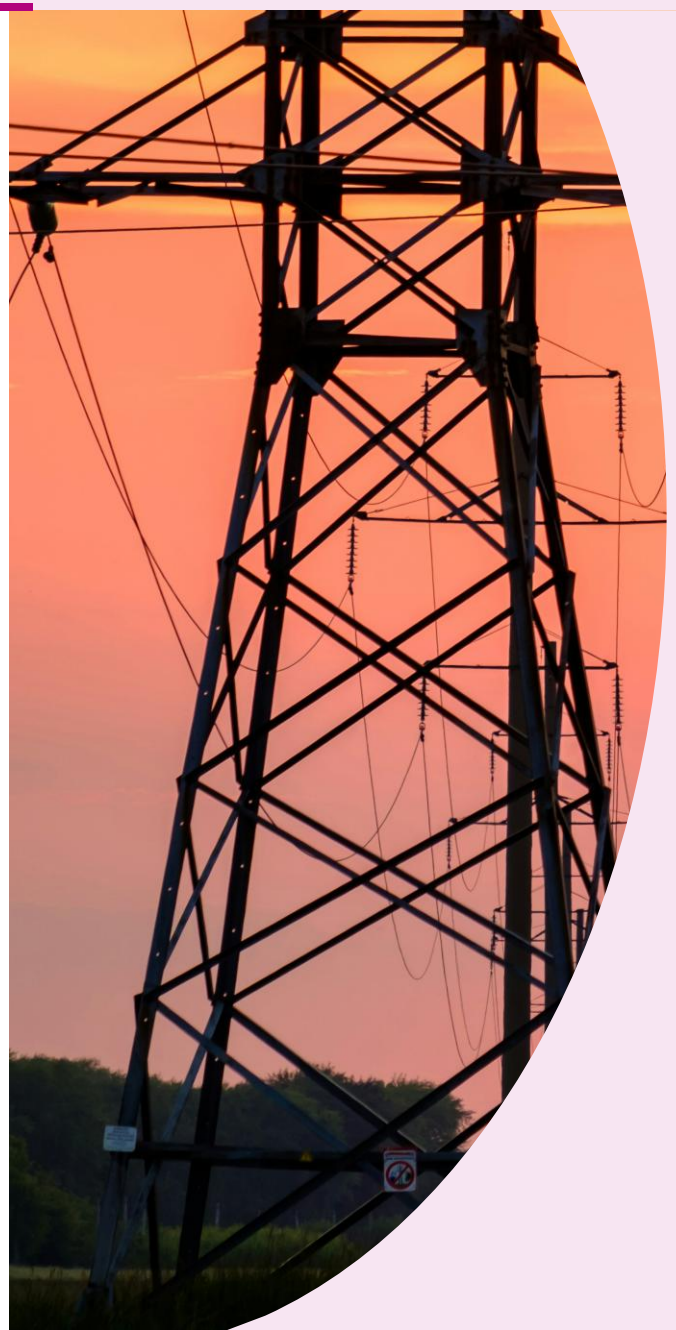
This often forces developers to size systems conservatively to match on-site demand rather than optimising generation potential.

However, grid constraints are not solely driven by export capacity. Even systems designed with export limitation devices, such as **G100** schemes that are not intended to export electricity under normal operating conditions, can still contribute to network constraints.

During fault conditions, inverter-based generation can inject fault current into the network, potentially affecting protection systems, fault levels, and wider network stability. As a result, connection assessments must consider not only ongoing power export but also the impact that distributed generation may have during abnormal operating conditions.

In some regions, particularly those with high levels of embedded renewable generation, concerns regarding fault current contribution, system stability and network resilience can restrict new connections even where a proposed installation appears to have limited or no export capability. Consequently, projects sized primarily for on-site consumption can still face significant connection challenges, reflecting the broader need for investment and reform across the electricity network.

As a result, there is a widely held view across the sector that the scalability of rooftop solar is now increasingly limited by grid infrastructure rather than physical or on-site technical constraints. Whilst **CMP446** - an amendment raising the threshold of solar PV to assist quicker grid connections - and connection queue reform in line with the **Clean Power 2030 Action Plan**[11] have gone some way to alleviate these issues, addressing these network challenges, particularly for medium to large-scale installations, is therefore critical to unlocking the next phase of growth in the market.



[11] DESNZ Clean Power 2030 Action Plan

Policy and regulatory uncertainty

Whilst the UK government has recently clarified the direction of travel on energy efficiency regulation for non-domestic buildings, the lack of policy and regulatory certainty remains a major concern for real estate investors and developers. **37%** of those surveyed noted this lack of clarity as one of the primary challenges in the widespread adoption of solar PV.

> Regulations around proximity of panels to roof lights would be welcome.

The government has now confirmed its intention to mandate a minimum EPC rating of B for privately rented non-domestic buildings over **1,000 sqm** in England and Wales from **2031**. This represents a one-year delay from the previously indicated **2030** target and introduces a size threshold, while also removing the previously proposed interim milestone of EPC C by **2027**.

Based on VOA[12] and related Government datasets[13], it's estimated that approximately **200,000–250,000** non-domestic buildings in England and Wales both exceed the **1,000 sqm** threshold and currently fall below EPC B. These assets represent a concentrated portion of the commercial stock in terms of energy demand and carbon emissions, and therefore are likely to be the primary focus of future regulatory enforcement.

Despite the headline announcement, the details of how the regulations will work have yet to be published. At the same time, whilst the current Minimum Energy Efficiency Standards (MEES) EPC E minimum remains in force for all non-domestic properties outside the scope of the proposed changes, no further deadlines have yet been defined for smaller buildings below **1,000 sqm**.

More broadly, changes to building regulations, the introduction of the Future Buildings Standard, moves to rebalance gas and electricity costs, planning reform and ongoing uncertainty over the regulation of embodied carbon and the future of EPCs all add to a changing and challenging policy environment.

In parallel, the tax and regulatory treatment of rooftop solar and on-site energy generation remains inconsistent and, in some areas, unclear, adding a further layer of uncertainty to investment decisions.

For example, ambiguity and restrictions on Real Estate Investment Trusts' (REITs) - which are companies that own and operates real estate – use of solar PV across their portfolios to drive additional revenues could have the effect of stifling investment in renewable energy generation among an investor class which holds a huge portion of viable roofspace in the UK.

More broadly, complexity in areas such as VAT treatment, business rates interaction, and energy supply regulation continues to increase transaction costs and slow project delivery.

While recent reforms to grid connection processes have begun to address some barriers, regulatory friction remains a key factor limiting the speed and scale of deployment.

As a result, the UK CRE sector continues to operate in a policy environment where the long-term direction of travel is clear for certain asset classes, but gaps remain in terms of detailed policy, implementation, enforcement, and coverage. This lack of certainty continues to influence investment decision-making, as stakeholders balance clearer long-term signals with unresolved questions around regulation, timing, scope, and compliance requirements.

*Note: The original survey underpinning this report was conducted prior to the UK Government's confirmation of the updated EPC B requirement (including the **2031** timeline, size threshold, and removal of interim EPC C targets). The above reflects these changes for completeness and context.*

[12] Valuation Office Agency Official Statistics Non-domestic Rating: Business Floorspace Statistical Commentary
[13] Energy Performance of Buildings Certificates (EPC) in England and Wales 2008 to 31 March 2026

Mind the EPC Gap

Of the approximately **800,000** currently valid non-domestic EPCs in England and Wales, over **70%** are rated below EPC B, the minimum level proposed under future MEES requirements. However, many of these properties are below the proposed **1,000 sqm** threshold (roughly the equivalent of **5 x tennis courts**) and are therefore unlikely to be affected by the current policy proposals. Based on VOA property stock data and EPC distributions, it is estimated that **200,000–250,000** non-domestic buildings **exceed 1,000 sqm** and remain below EPC B. This equates to approximately **25–30%** of the non-domestic building stock, representing a significant proportion of the sector's floorspace, energy consumption, and carbon emissions.

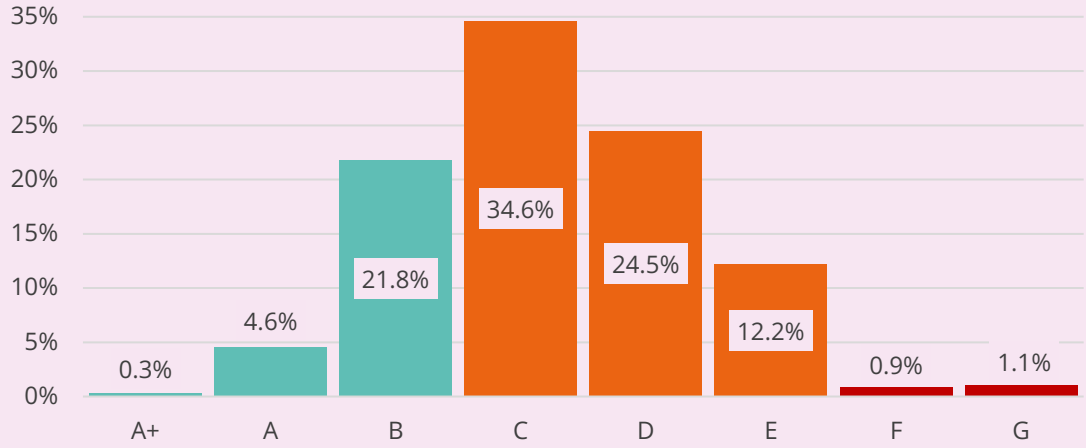
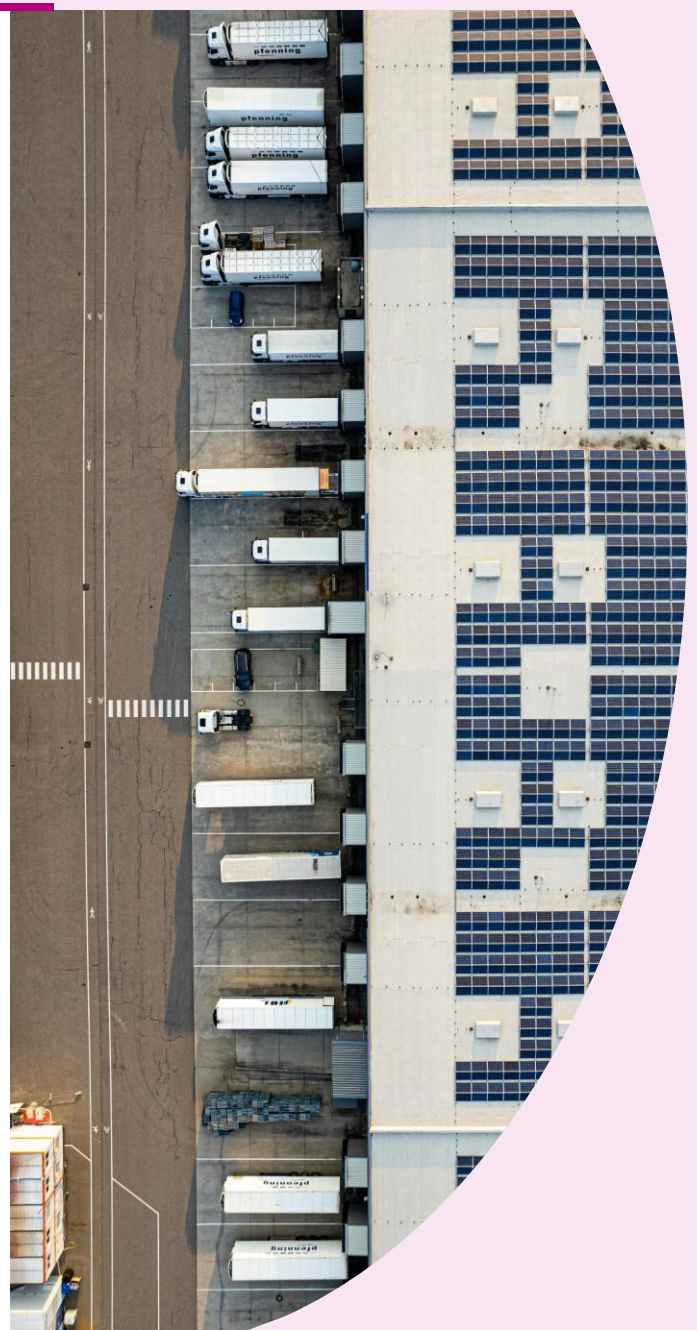


Figure 4: Table showing the percentage of commercial buildings in each EPC band across England and Wales



06

Policy Recommendations

6. Policy Recommendations

1. Address tax and regulatory barriers

1.1 REIT Regime

Clarify the treatment of solar within the REIT rules and broaden the REIT regime to include renewable energy generation.

The current REIT regime creates uncertainty or unnecessary limitations for some institutional investors seeking to deploy rooftop solar and supply renewable electricity to occupiers. Specifically, there are restrictions which ensure that REITs' tax transparent status is contingent on incomes being primarily raised from their property rental businesses. Revenue generated from rooftop solar clouds this picture and is often treated as non-qualifying trading income, with REITs being subject to strict upper limits on the proportion of such income they can safely receive without affecting their tax treatment. This uncertainty about the long-term impacts on REITs tax status can deter investment and limit deployment at scale. The application of these rules can be complex depending on how that solar income is defined/treated at each scheme.

As a minimum, the Government should provide clear guidance and safe harbours confirming the treatment of solar-related income in different scenarios. More ambitiously, the REIT regime could be expanded to explicitly accommodate income from renewable energy generation and supply, recognising that commercial buildings increasingly operate as both real estate and energy infrastructure and REITs should not be disincentivised from investing in solar on their assets.

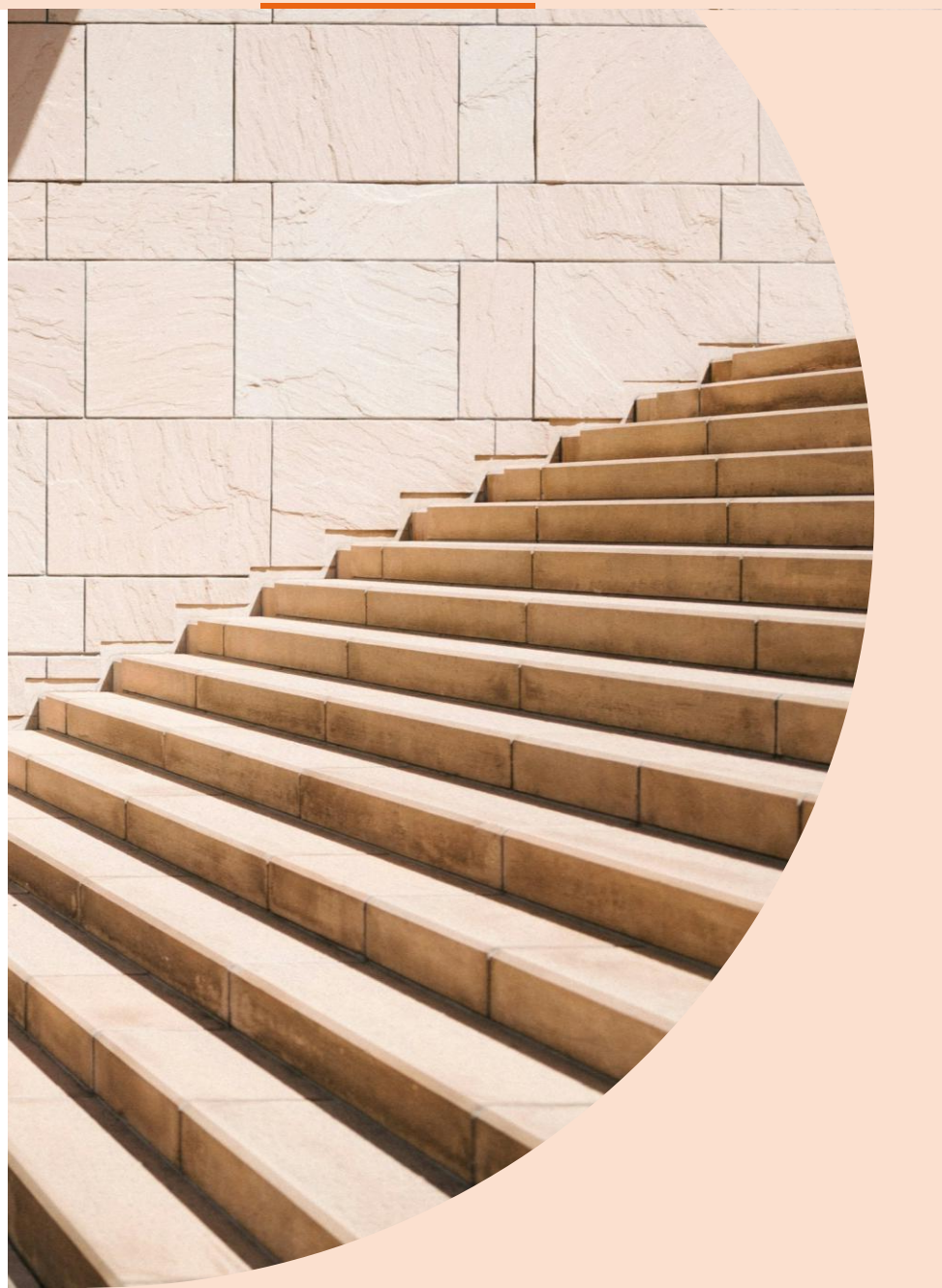
1.2 Business rates

Extend the business rates exemption for solar panels beyond 2035.

The previous Government introduced an exemption from business rates for qualifying renewable plant and machinery, which has been an important measure in ensuring that investment in rooftop solar is not discouraged by unintended increases in rateable value.

It sought to address scenarios whereby the uplift in rateable value exceeded potential savings on energy bills. The current exemption expires in **2035**.

Given the scale of untapped rooftop solar potential across the commercial real estate sector and the Government's long-term decarbonisation objectives, and the fact that many solar systems will have a lifespan of **25 years** or more, the exemption should be extended beyond **2035** to provide certainty for investors and ensure that business rates do not become a barrier to deployment.



1.3 Capital Allowances

Introduce additional capital allowances reliefs and tax incentives such as a super deduction for solar arrays.

Current capital allowance incentives primarily reward taxable entities, whereas much of the UK's commercial property stock is owned by institutional capital, including pension funds, that cannot fully utilise those allowances.

While the Annual Investment Allowance (AIA) can provide accelerated tax relief for smaller businesses, existing capital allowance regimes do not always provide a sufficient incentive for large-scale deployment of rooftop solar across institutional real estate portfolios. Many of the UK's largest property investors, including pension funds and other tax-exempt investors, are unable to fully benefit from capital allowances in the same way as taxable corporate occupiers. As a result, the investors and developers with the greatest potential to deploy rooftop solar at scale often receive limited direct benefit from existing reliefs.

In addition to the cost of solar panels and electrical infrastructure, many projects require expenditure on roof strengthening, structural upgrades and associated enabling works. Government should therefore consider introducing a more generous incentive, such as a dedicated solar super-deduction or enhanced first-year allowance, applicable to solar panels and associated costs.

Alternatively, equivalent mechanisms should be explored to ensure tax-exempt institutional investors can also capture the benefit of investing in rooftop solar. This would improve project viability, shorten payback periods and help unlock private capital for rooftop solar deployment across the commercial real estate sector.

Tenant engagement also remains a key barrier to deployment, particularly where lease lengths are shorter than solar asset payback periods, or where tenants are responsible for roof maintenance and associated works.

Government should consider how existing or new tax incentives could help align landlord and occupier interests and encourage participation in rooftop solar schemes (e.g. business rates incentives that go beyond the exemption referred to above). This could include targeted reliefs for occupiers entering into long-term solar agreements, participating in rooftop solar projects, or enabling landlords to deploy solar infrastructure on occupied assets.

2. Support standardisation of commercial frameworks

Encourage a move towards more standardised legal templates and lease clauses.

The lack of standardisation in leasing and legal structures is one of the most significant barriers to scale. As identified in the research, each project is often negotiated on a bespoke, case-by-case basis, increasing legal costs, delays, and the risk of deals failing altogether.

Given the industry's experience with attempts to standardise legal templates in the past (note: City of London's Wayleave Agreement, the Model Commercial Lease and the Better Buildings Partnership's Green Lease Toolkit) universal adoption is always likely to prove challenging.

However, encouraging industry bodies to develop and share standardised templates and playbooks for PPAs, lease clauses, and commercial structures would help materially reduce these frictions.

Establishing accepted market norms between legal advisors and their clients when integrating solar into FRI leases, multi-let assets, and landlord-tenant arrangements would allow projects to move from bespoke transactions to repeatable, portfolio-wide deployment strategies more smoothly. This is essential to shifting the market from opportunistic delivery to systematic rollout.

3. Consistent insurance requirements

Work with insurers and regulators to introduce clear, consistent standards and requirements for solar rooftop projects.

Insurance requirements are currently inconsistent and often determined on a case-by-case basis, introducing uncertainty late in the design process. This can result in redesigns, reduced system sizes, or even project termination.

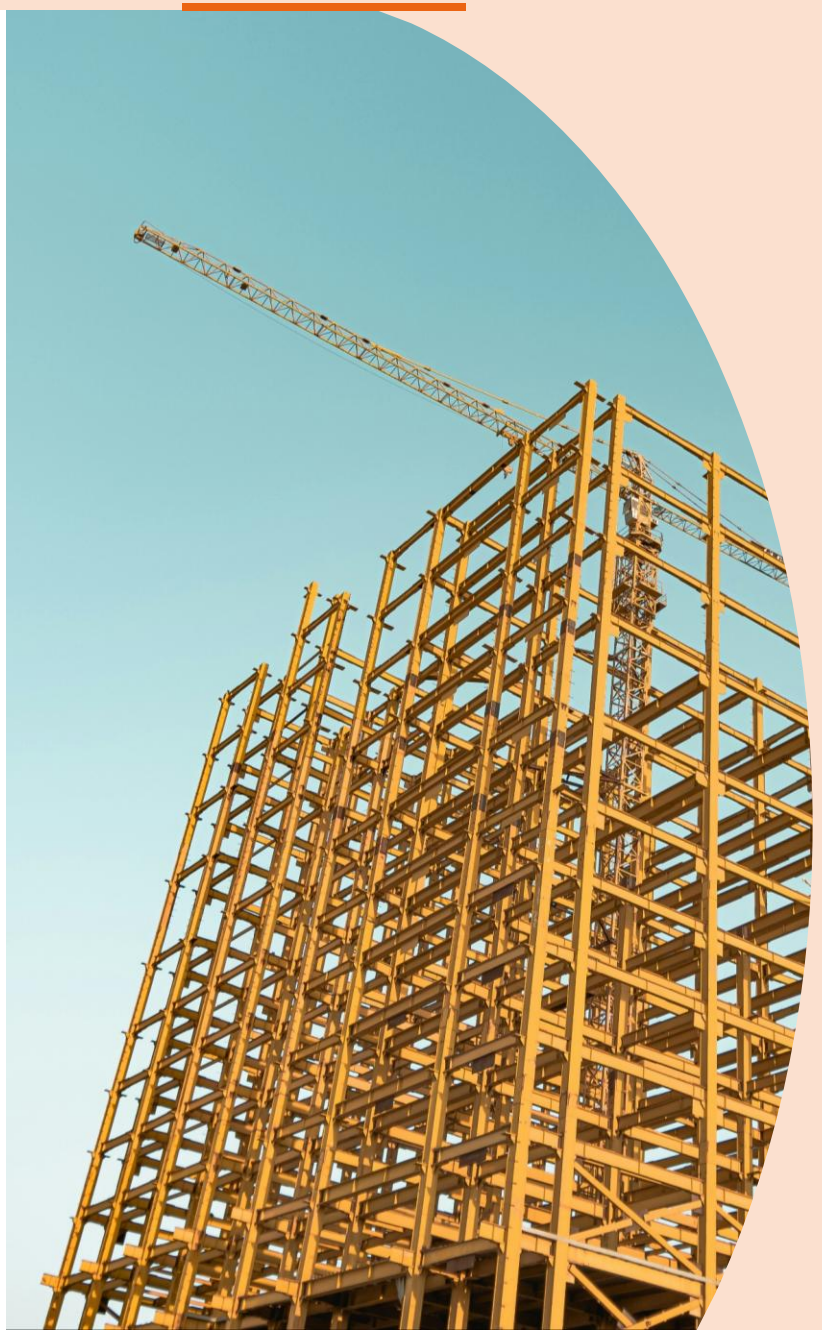
Introducing clear, universally recognised standards would allow compliance to be assessed at the earliest stages of project development. For example, prescriptive guidance on fire safety design, minimum clearances, and rooflight separation distances would reduce design risk, improve cost certainty, and avoid the current situation where insurance constraints can materially impact system viability or scale late in the process.

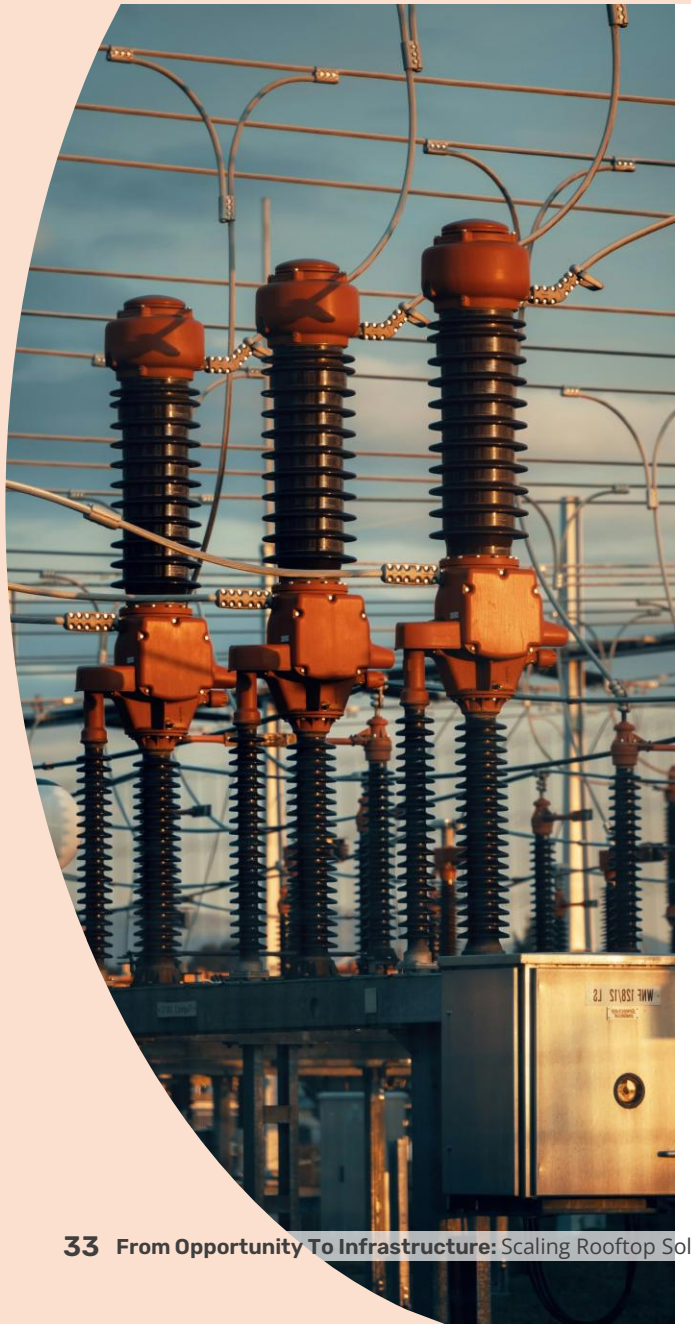
4. Improve export economics

Introduce a guaranteed, long-term export pricing mechanism, in line with our European competitors.

Export revenues in the UK remain low and inconsistent, limiting their role in the overall business case for rooftop solar. As a result, most projects are forced to prioritise self-consumption, which in turn constrains system sizing and reduces total generation potential.

Introducing guaranteed, long-term export pricing mechanisms, similar to historic FiT models or European equivalents, would significantly strengthen project viability. This would enable landlords and investors to design systems based on available roof capacity rather than just on-site demand, unlocking larger installations and improving both financial returns and carbon savings across CRE portfolios.





5. Grid reform and investment

Accelerate grid reform and investment to improve connection timelines and unlock capacity for rooftop solar.

Grid constraints are one of the most critical barriers to scaling rooftop solar, particularly for larger systems seeking to export surplus electricity. Even viable projects can face delays, downsizing, or export constraints due to limited capacity and long connection timelines.

Addressing this requires both physical investment in network infrastructure and continued reform of connection processes. Faster, more predictable connection timelines and improved visibility of grid capacity and connection costs would enable larger schemes to proceed. Minimum service standards for response times, information requirements, cost explanations and timeline updates would also improve the process and address some of the concerns raised by industry. In the CRE commercial real estate sector, this would allow landlords and investors to fully utilise roof space and move beyond conservative, demand-led system sizing.

6. Strengthen policy clarity and certainty

Publish the remaining, outstanding details of new minimum energy efficiency standards for the commercial private rented sector and build on direction of travel in Future Buildings Standard

Ensure the review of the Landlord and Tenant Act 1954 removes any barriers to the installation of solar following lease renewals

Mandate energy data sharing to enable landlords to size solar systems accurately and predict savings and payback with confidence.

While the long-term direction of travel is clear, policy uncertainty remains a barrier to investment, particularly where future regulations are not yet fully defined or legislated.

Providing clear, long-term policy signals, alongside firm commitments to future standards, would give investors the confidence to deploy capital at scale.

The Government has announced an interim response to its previous consultations on minimum energy efficiency standards for the non-domestic private rented sector. This should help accelerate the transition to renewable energy in commercial buildings, including solar energy, but investors and developers need to see the remainder of the Government's response to the consultation as well as the detail of the regulations in order to understand how the new targeted approach will work.

The new Future Buildings Standard will support the installation of solar PV on new commercial buildings but existing policy and regulation should also encourage the deployment of solar PV across existing buildings.

The Law Commission is currently consulting on reforms to the Landlord and Tenant Act **1954**, which governs the lease renewal process for certain business tenancies. These reforms should look into whether the revised legislation could be used to incentivise adoption of solar. This could take the form of a presumption in favour of changes to renewal lease terms which relate to solar installation works. There would need to be exceptions and grounds to object given that every building and every asset is different but the presumption could help kick start these decarbonisation discussions through the **1954** Act renewal process.

Sharing energy consumption data will also help landlords make better decisions about installing solar PV. It will allow landlords to install a solar PV system sized appropriately for the building, rather than relying on estimates, to better estimate costs and savings and, for those with large portfolios, to prioritise those properties that will benefit the most from solar PV.

This would help shift rooftop solar from a discretionary investment to a standard component of asset development and management, ensuring more uniform uptake across the sector.

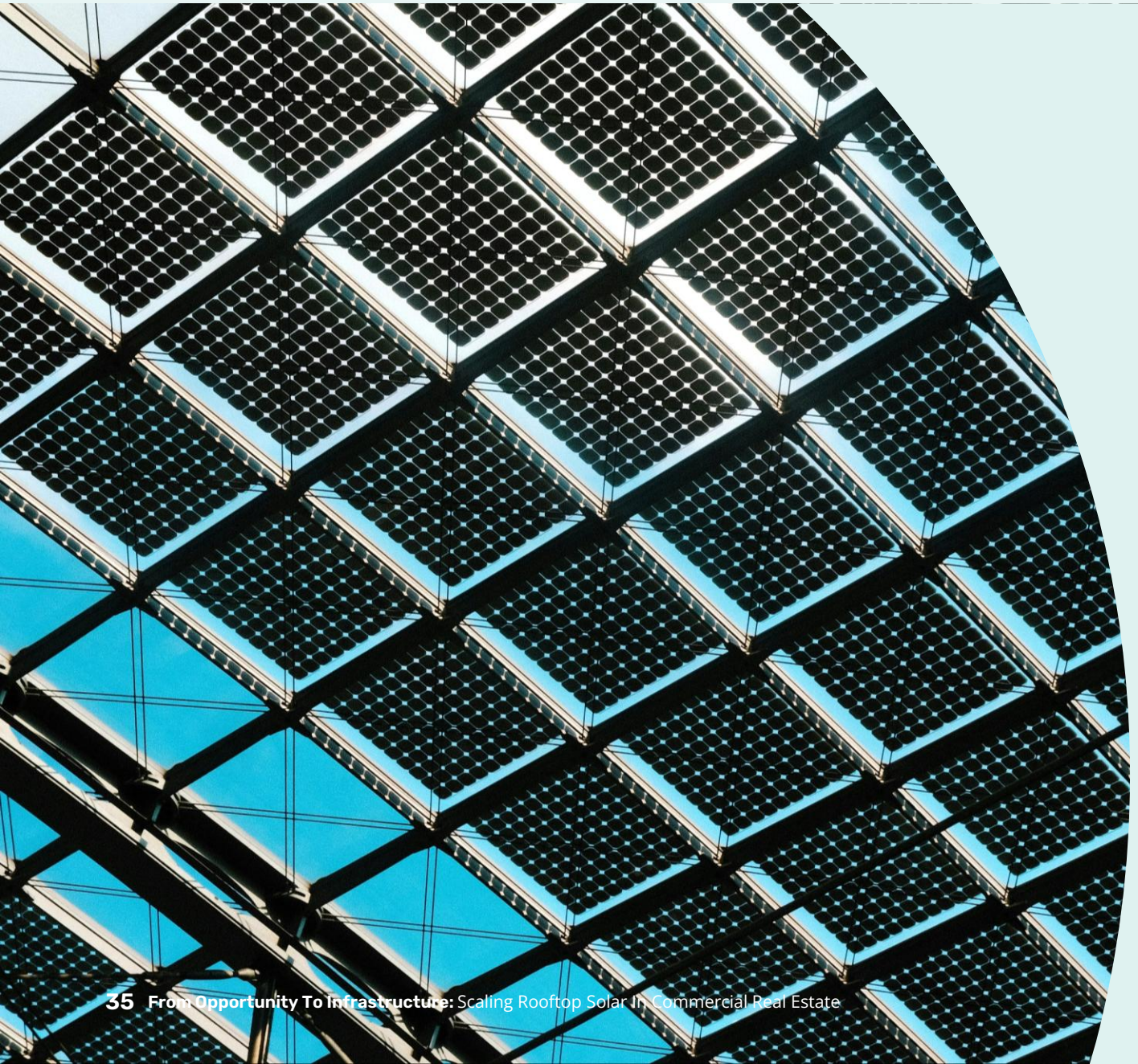
7. Planning

Increase the rooftop solar planning threshold requiring Local Planning Authority approval from 50 kW to at least 300 kW, reducing administrative barriers while maintaining existing planning and heritage safeguards.

Current planning regulations for non-domestic rooftop solar effectively operate through three approval routes: Permitted Development (PD), Permitted Development with Prior Approval (PDPA), and Full Planning Permission. While all installations remain subject to existing constraints, including requirements relating to roof-edge setbacks, panel projection limits, listed buildings and conservation areas, projects exceeding the current **50 kW** microgeneration threshold require Local Planning Authority (LPA) approval through the Prior Approval process.

The current **50 kW** threshold at which non-domestic rooftop solar projects require Local Planning Authority (LPA) approval no longer reflects the scale of the modern commercial rooftop solar market. Improvements in panel efficiency, rising electricity costs and increasing corporate decarbonisation commitments mean that many commercially viable rooftop solar installations now significantly exceed **50 kW**. As a result, a large proportion of otherwise straightforward projects are subject to additional planning requirements, creating unnecessary cost and delay.

Government should increase the threshold requiring LPA approval from **50 kW** to at least **250-300 kW**, or another appropriately evidenced level. This would better align planning regulations with modern commercial rooftop solar deployment, reduce administrative barriers and accelerate project delivery, while retaining existing safeguards relating to visual impact, heritage assets, listed buildings and conservation areas. Such a change would improve investment certainty and support the rapid expansion of rooftop solar across the UK's commercial building stock.



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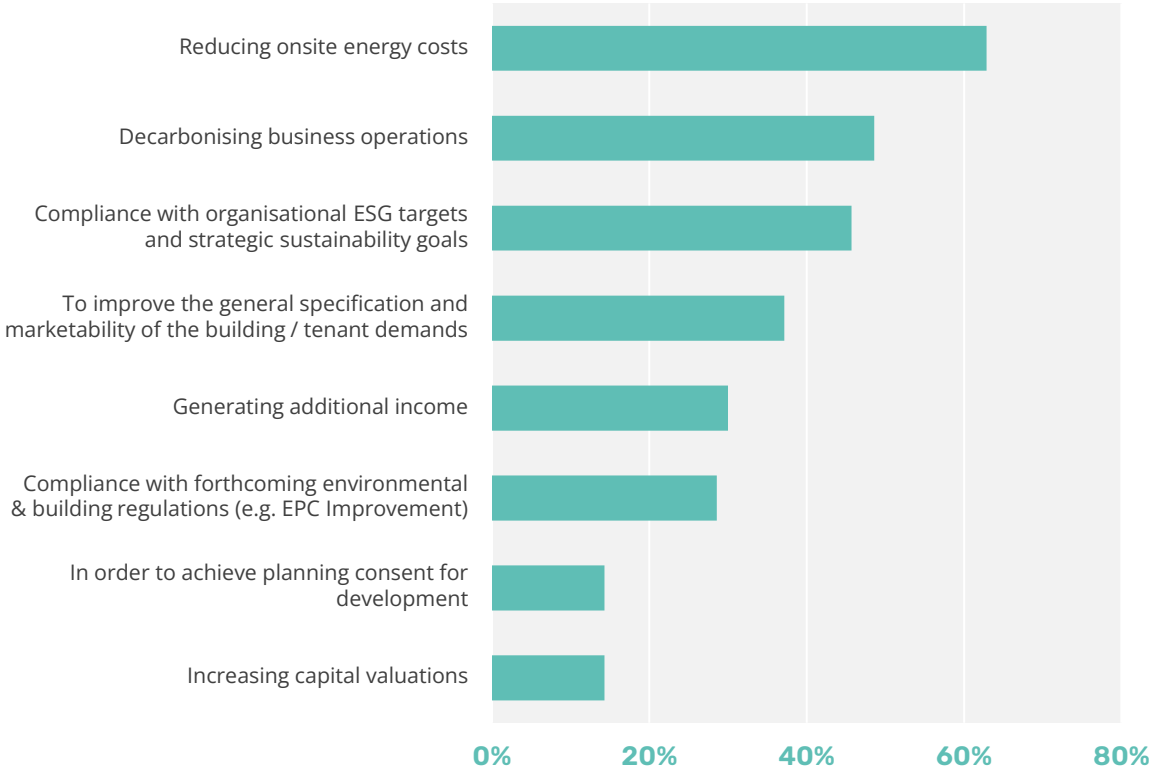
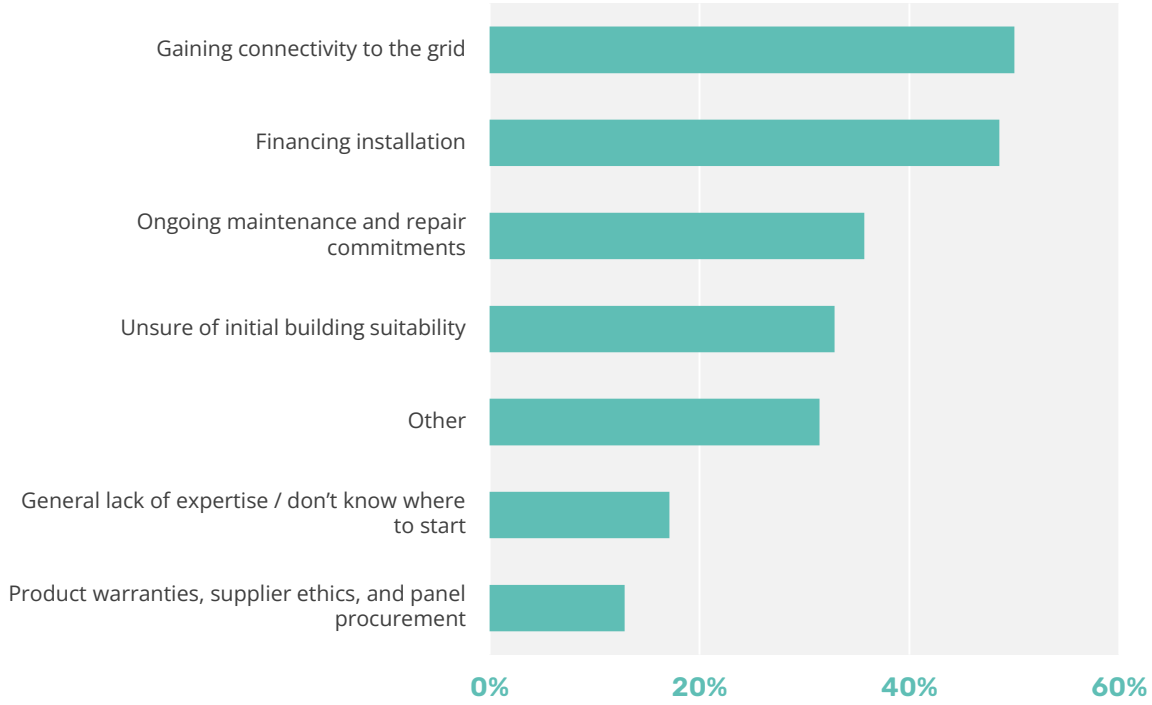
Appendices

9. Appendices

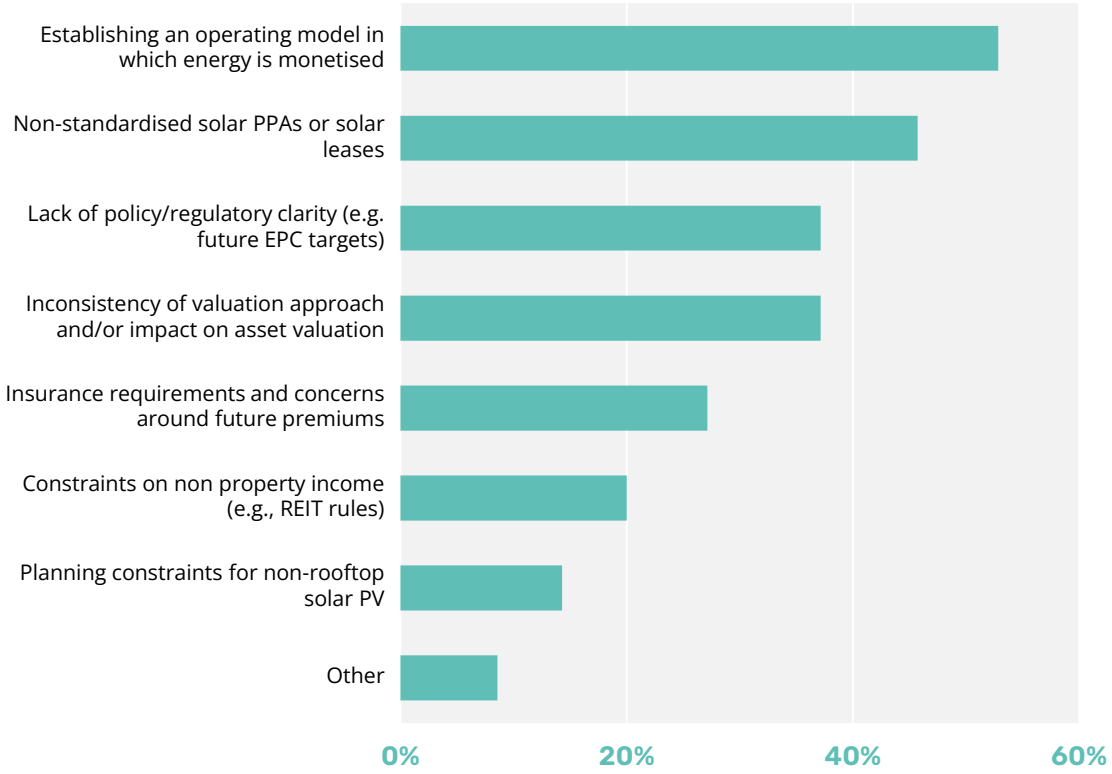
Top motivators driving the adoption of solar PV



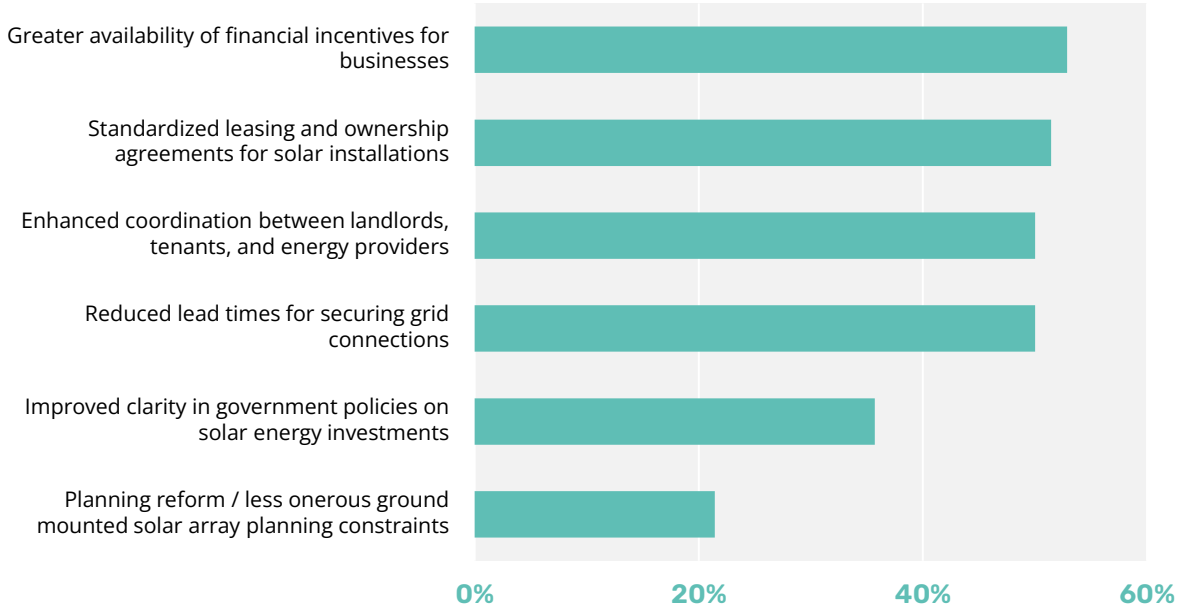
Primary technical challenges preventing the widespread adoption of solar PV



Primary regulatory and policy challenges preventing the widespread adoption of solar PV



Industry-wide improvements considered most likely to accelerate solar PV adoption in commercial real estate



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About Cushman & Wakefield

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