Lumen ENERGY

Q4 2026 • ISSUE 02 • VOL. 1 • OCTOBER 2026

THE STATE OF SOLAR LEASING

Who pays for the roof?

Issue 02 of the Lumen Commercial Solar Index turns to the roof itself: what developers charge for the right to replace it mid-lease, how lost energy revenue and roof replacement clauses read in 2026, and the fire-safety questions every owner should put to a rooftop bidder.

TURN ROOFTOPS INTO REVENUE.

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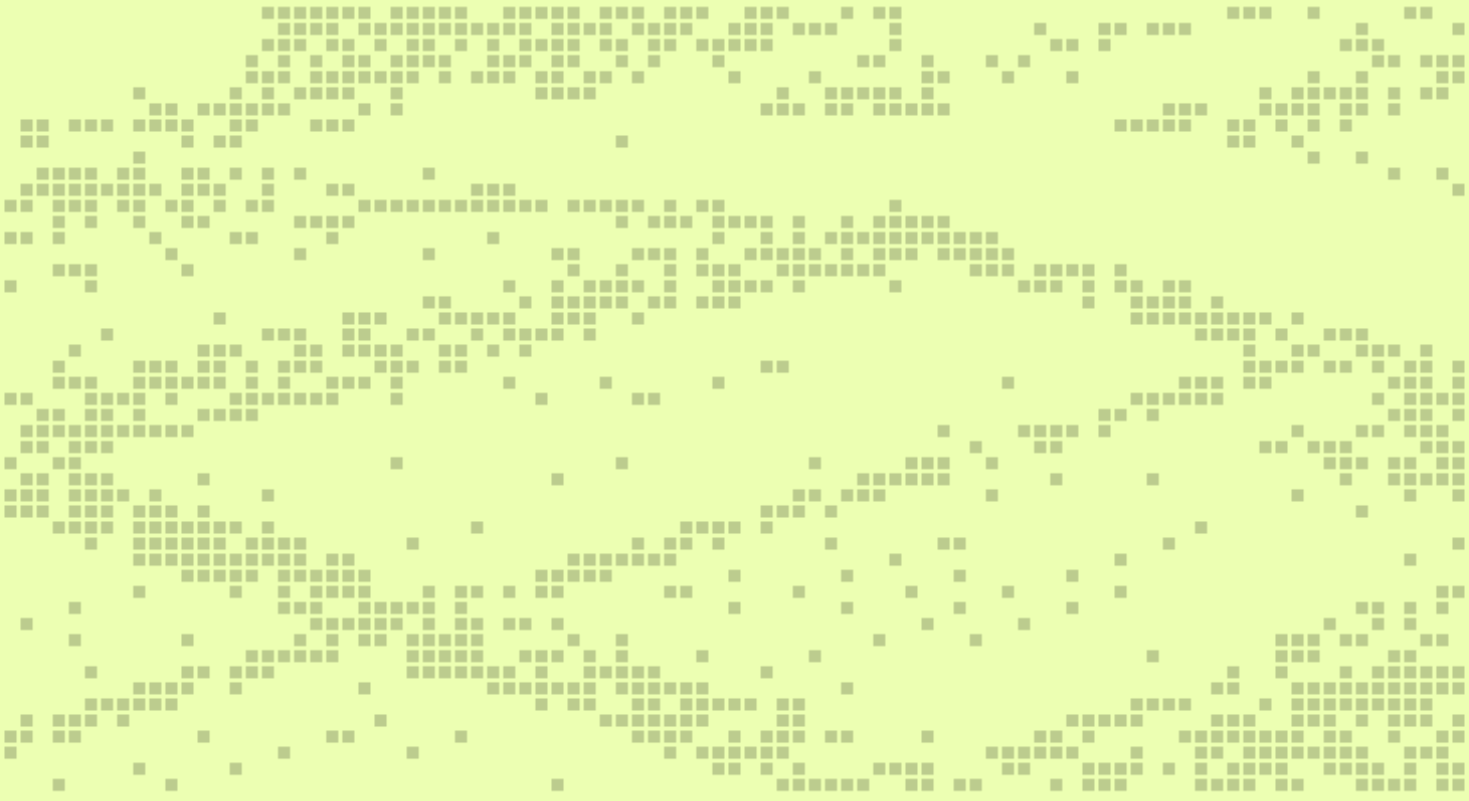


[WHY NOW]

Most leases outlive the roof

Our first issue asked what a developer will pay to lease your roof. The answer: it varies by almost 3x for the same roof. This issue turns to the building owner's side: what a solar lease requires of the roof, and how re-roofing fits inside the solar lease term.

A commercial membrane roof carries a 15- to 20-year warranty. A solar lease runs 20 to 25 years before extensions. So every rooftop lease has to settle what happens when the roof wears out first: who takes the array down, who pays for the days it sits offline, and how much rent the owner gives up for the right to decide when. A few clauses settle all of it, and they get far less attention than the rent line.

> On a 100K sq ft roof, one of them is worth about $170,000.

We priced that clause using matched bids: the same developer bidding the same building with and without a re-roof right. We break down Lost Energy Revenue and Roof Replacement, the two terms that decide who pays when the array goes dark. And at the end, we set out what owners can require from providers on fire safety.

Send us a line on what you'd like us to take on in Issue 03.

— THE LUMEN RESEARCH TEAM

[THE NUMBERS THAT MATTER]

Executive summary

Q4 2026 puts the roof at the center of the solar lease. Owners with midlife roofs ask for a scheduled right to replace the roof during the term, and developers price that right very differently. Across the developers in our matched-bid sample, the median reduction in lifetime lease payments in today's dollars of a one-time re-roof right is about $0.17, roughly $170,000 on a 1 MW system, typically paid for through lower rent. When the right opens, how long the owner has to finish the work, and how the lease defines Lost Energy Revenue decide whether a re-roof is a planned expense or an open-ended one. And a summer fire on a Los Angeles rooftop array has put equipment and maintenance on the owner's diligence list next to rent.

MEDIAN RE-ROOF RIGHT COST • Q3 2026

$0.17 / W

$170,000 on a 1 MW system, paid through reduced rent.

SAME ROOF, SAME RIGHT

3.7x

The spread between the cost of a year-13 re-roof right in five developers' bids.

[WHAT WE'RE SEEING]

Seven takeaways for owners

01 **Developers price the re-roof right very differently.**

Median developer pricing ranged from $0.05 to $0.31 per watt. This translates to about $50,000 to $310,000 in today's dollars being removed from the lifetime lease payments for a 100k sq ft roof.

02 **The spread reflects underwriting, not obligation.**

Developers in our sample used one of three approaches: a flat premium, a price adjusted for timing and likelihood of exercise, or the full expected cost reserved in rent from day one. On one building, five developers lowered their rental bids by $0.07 to $0.26 per watt over the lifetime of the contract for the same year-13 re-roof right.

03 **Early flexibility costs disproportionately more.**

One developer charged $45,900 per MW per year for a right opening in year 7, $12,300 for year 10, and $4,600 for year 15, across three comparable buildings.

04 **Longer term and deferred payment can offset the cost.**

In one bid, five more years of term restored the rent in full. Two developers offered to hold full rent until the owner re-roofs, then step it down.

05 **Lost Energy Revenue (LER) exposure peaks in the first five years.**

Tax-credit recapture makes an extended outage in that window the most expensive, and most leases treat Lost Energy Revenue as direct damages. About a third of leases carry an annual free-outage allowance.

06 **Owners get 90 to 150 days to finish a re-roof.**

Inside the window, the developer absorbs its own lost revenue. After it closes, the owner pays every day until the system is back online, with no cap.

07 **Rooftop fire risk centers on connections, not panels.**

A UK study attributed about 36% of PV-caused incidents to poor installation. A US inspection firm found 34% more major and critical connector issues per megawatt on systems with module-level electronics.

01

The price of a right to re-roof

What developers charge for the right to replace your roof mid-lease, measured on matched bids for the same buildings.

[01 • THE PRICE OF A RIGHT TO RE-ROOF]

What a re-roof option costs

A commercial solar lease typically carries a 20-year initial term, and extension options can push it to 35 years. Few commercial roofs last that long. Owners who expect a roof replacement during the term negotiate a one-time roof replacement option into the lease. The owner still funds the new roof, just as they would without a solar tenant. The option governs what happens to the system on top of it: when the owner exercises it, the developer removes the array, stores it while the roofing crew works, and reinstalls it afterward. The developer bears the cost of that removal and reinstall, plus the revenue the system forgoes while it sits offline. That protection is not free.

In this issue, we quantify the trade by comparing bids where the same developer priced the same building with and without the right.

Physical decom/recom cost

This is what the developer expects the removal, storage and reinstall work to cost, when it stated one in its bid.

Implied option cost

This is the value of the rent reduction, restated as a lump sum in the year the right opens.

Annual rent impact

This is how much less rent the owner receives in year one, per MW.

[CONVENTIONS]

Money the owner gives up is negative; rent the owner receives is positive. Capacity is DC nameplate throughout, written MW and W. A 1 MW system is roughly the solar that fits on a 100,000 square foot industrial roof, so every $0.10 per watt is $100,000 on that system. Removing and reinstalling the array is called decommissioning and recommissioning, or decom/recom.

Question 1: What does the right to re-roof cost?

$0.17 / W

$170,000 ON A 1 MW SYSTEM

The median implied option cost to the landlord.

-$18,600

PER MW, PER YEAR

The median annual rent impact. This is the rent the owner gives up per MW each year to carry the right.

Across the developers in our sample, the median value each one placed on the right ranged from **$0.05 to $0.31 per watt**, which on a 1 MW system is $50,000 to $310,000 in lower rental payments over the lifetime of the lease. Individual bids ran wider, from $0.04 to $0.45 per watt, depending on the building and the year the right opens. The spread is large enough that how the clause is structured, and which developer prices it, can change the economics of a lease.

HOW WE COMPUTE IMPLIED OPTION COST

Each matched pair tells us how much rent the developer gives up in exchange for the re-roof right. We add up that stream of rent over the lease term and discount it to today, so that bids with different terms, escalators and start years are compared on the same footing: what the owner gives up, in today's dollars. The inputs are:

R = The year-one rent reduction in dollars per kW per year, the difference between the two bids.

g = The annual rent escalator in the bids, 2% in most and 0% in some. It is the same in both bids of every pair, so the rent reduction grows at the same rate.

T = The lease term in years.

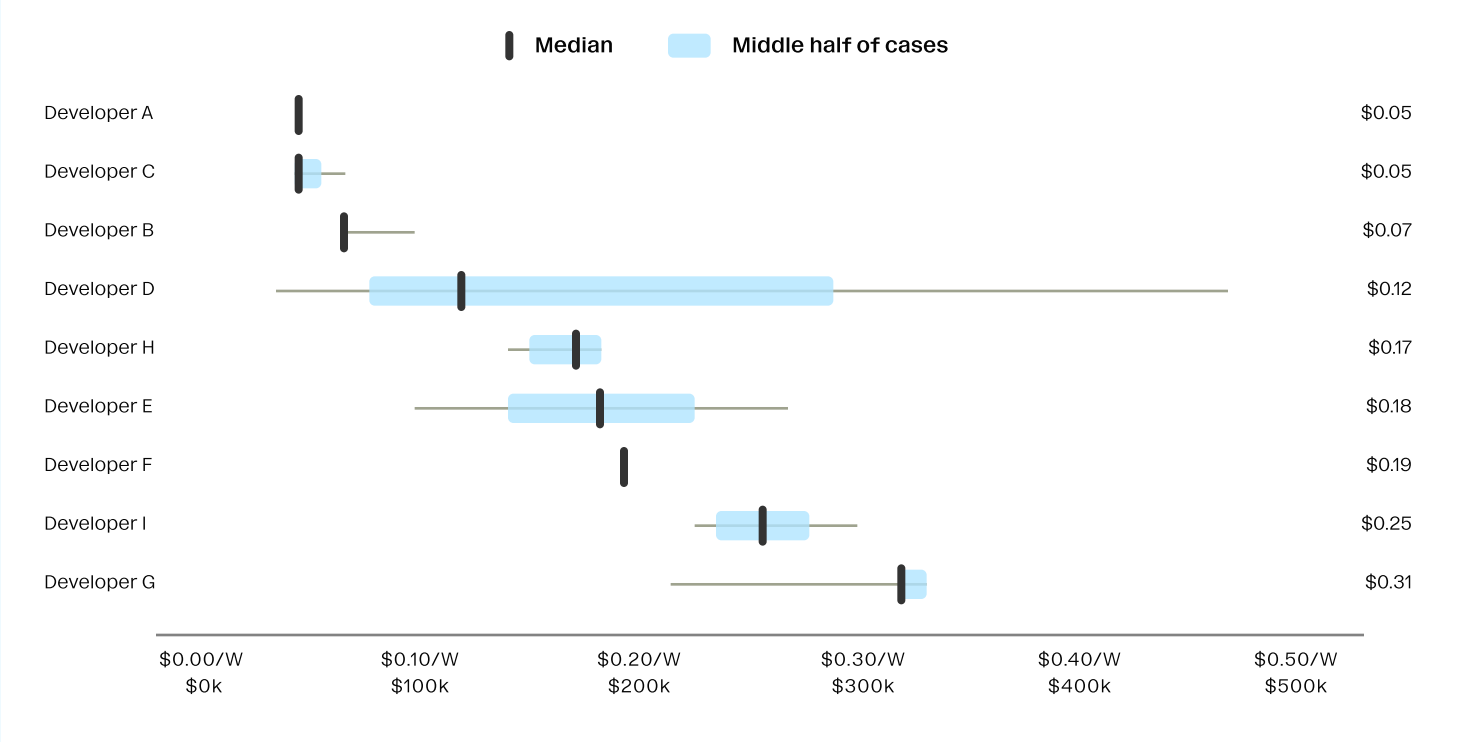
d = The discount rate. We use 10%.

$$\text{Implied option cost (\$/W)} = \frac{R}{1{,}000} \times \sum_{t=1}^{T} \frac{(1+g)^{t-1}}{(1+d)^{t}}$$

The sum is the value today of $1 of year-one rent that grows at g for T years. Multiplying by (1 + d)Y restates that value in year-Y dollars, the year the developer expects to pay for the work. Dividing by 1,000 converts dollars per kW to dollars per watt.

Implied option cost, by developer

Values are $/W at the 10% discount rate, including each bid's rent escalator. The band covers the middle half of that developer's cases, the thick mark is the median, and the thin line is the full range across buildings. The second axis figure is the cost on a 1 MW system.



Question 2: Why does the price vary so much?

Three things drive the price of a re-roof option: what the developer thinks the work will cost, how soon and how likely the owner is to use the right, and how the developer chooses to underwrite it.

A Actual work cost.

Labor rates, whether the developer self-performs or subcontracts, and whether it assumes the panels and racking can be reused all factor into the option cost. Some developers shared their own estimates of what this work costs in their bid notes, and the figures range from $0.30/W to $1.26/W for the same scope.

B Timing and likelihood.

Timing matters most in the early years. In our sample, a right that opens in year 7 reduced annual rent by about four times as much as one that opens in year 10 or later, while the implied option cost rose by less than two times. Owners appear to pay a disproportionate premium for early flexibility. Only one developer in our sample bid a year-7 right, so this comparison rests on that developer's pricing across three comparable buildings rather than on a market-wide pattern.

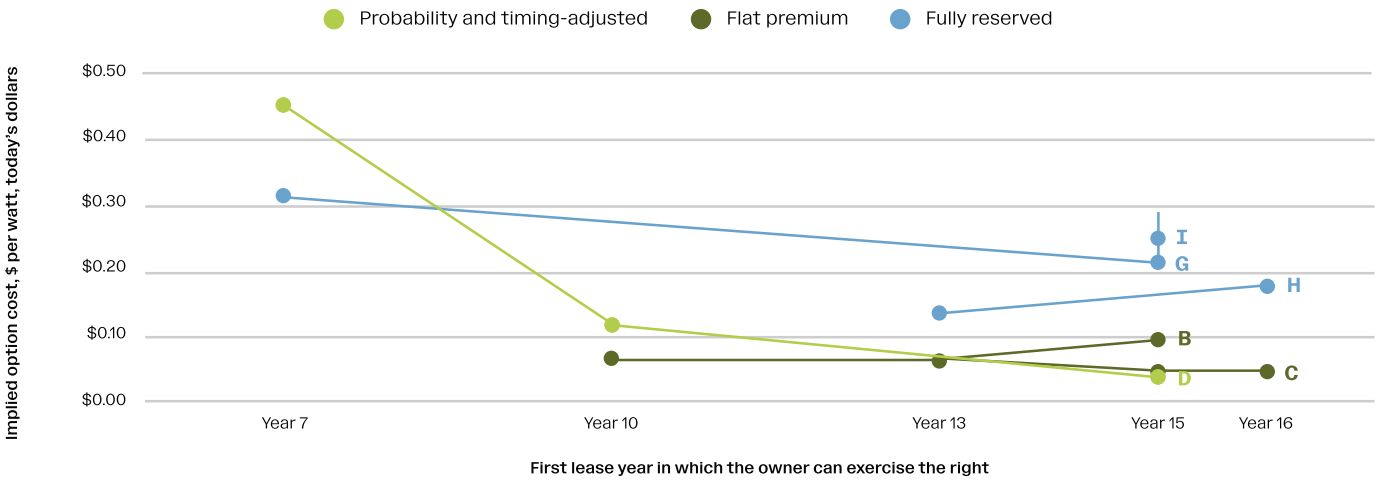
Two things explain why an early roof replacement right costs more. First, a right available earlier in the term typically corresponds to an older roof, so the likelihood of being replaced during the term is higher relative to a newer roof. And second, an earlier available option means the roof replacement is likely to occur earlier in the term. A dollar of cost that lands in year 13 is worth 29 cents today at a 10% discount rate but worth 51 cents if the cost lands in year 7, so a developer assigns less present value to a distant cost and gives back more rent when the eligible year moves later. This is not an exact science. We observe the lease bid pricing, but the bids do not state explicitly the roof replacement exercise probability each developer assumed.

C Developer underwriting strategy.

The bids in our sample fall into three approaches.

Implied option cost by first eligible year and developer.

Each line is one developer. A point is that developer's median implied option cost for rights opening in that lease year, and a short vertical bar shows the range where it had several bids at the same year. A developer that bid only one start year appears as a single point. Colors follow the three pricing approaches described below, and the chart shows the six developers covered there.



Packages in this set open the right in year 7, 10, 13, 15 or 16; none opens between 7 and 10. Read up and down at one year to see how much developers differ at the same start year. Follow a line to see how one developer's price moves as the start year changes. Every $0.10 per watt is $100,00 on a 1 MW system.

Flat premium

The developer takes the same annual rent reduction whichever year the right opens. Developer B takes the same reduction on every building it has bid, whether the right opens in year 10 or year 15, and offers to waive it entirely in exchange for five more years of lease term. Developer C prices the same way. A flat premium favors an owner whose right opens early, but costs one whose right opens late, because the premium stays the same as the right becomes less likely to be used.

Probability and timing-adjusted

The developer starts from the expected physical cost, then discounts it for how soon and how likely exercise is. Developer D itemizes decom/recom at about $1.26 per watt and prices $0.45 per watt of it when the right opens in year 7, $0.12 when it opens in year 10, and $0.04 when it opens in year 15. This approach is the most sensitive to the start year, so it has the most to offer an owner who can push the eligible year later.

Fully reserved

The developer prices most or all of the anticipated cost into today's rent. Developers G, H and I price between $0.14 and $0.32 per watt on every building they bid.

On one building in the set, five developers bidding the same roof and the same year-13 right priced it between $0.07 and $0.26 per watt. Every one of those bids carries the same binding obligation to remove and reinstall the system when the owner re-roofs. The spread is a difference in how much of the expected cost each developer chose to price into rent today, not a difference in what it has agreed to do. An owner comparing headline rent alone is choosing among those pricing assumptions without seeing them.

Question 3: How should an owner negotiate it?

A Delay the first eligible year.

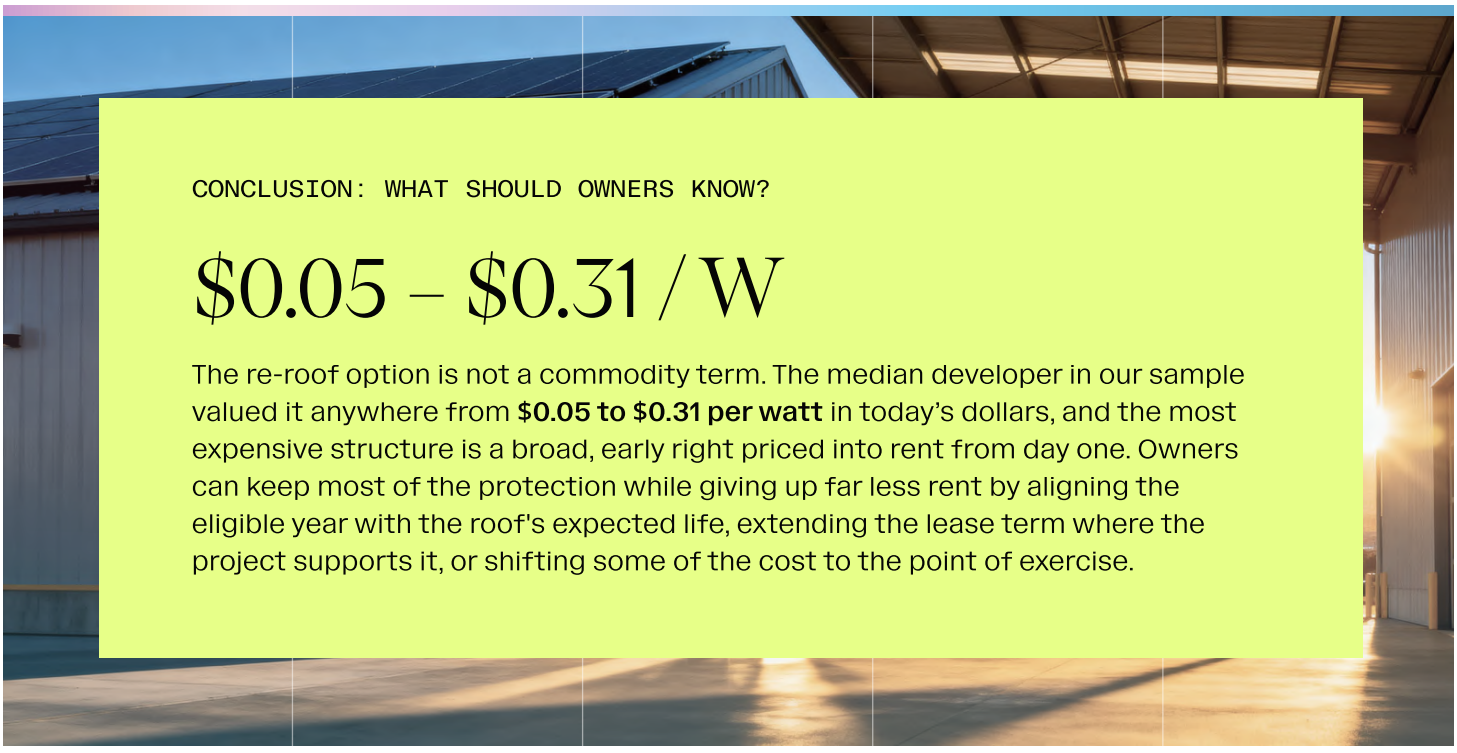
This is most valuable when the delay moves the first eligible year past year 10. On three comparable buildings, the same developer charged $45,900 per MW per year for a right opening in year 7, $12,300 for one opening in year 10, and $4,600 for one opening in year 15.

B Trade solar lease term for flexibility.

One developer quoted $38,000 per MW per year with no re-roof right over 20 years, $31,000 with the right over 20 years, and $38,000 with the right over 25 years. In other words, five years of extended term restored the rent in full. Another offered 27-, 29- and 35-year total term lengths sized to the remaining life of the current roof + the expected life of the replacement roof, at rents 16% to 54% above its own 20-year bids.

C Pay only if you use it.

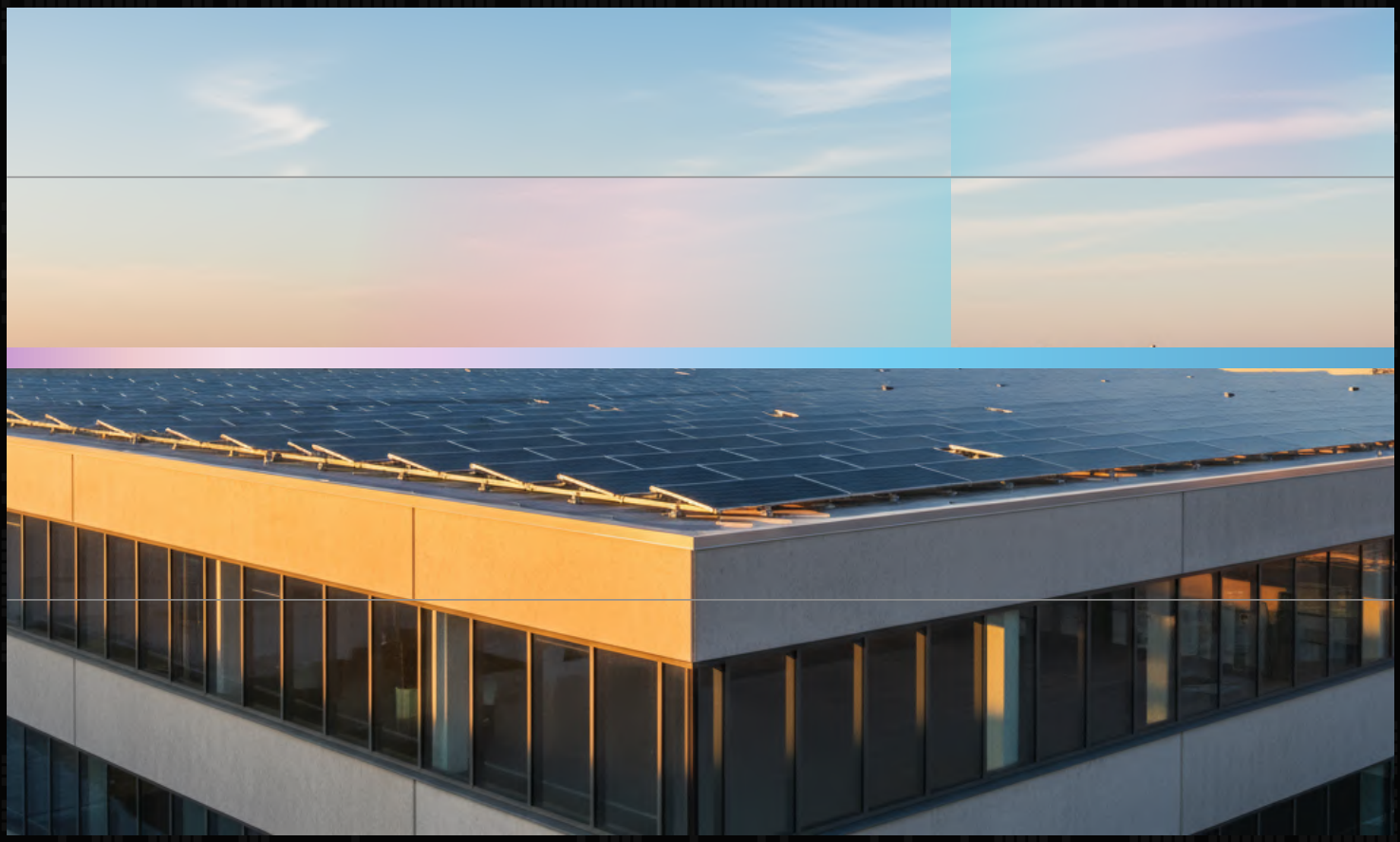
Two developers offered a choice: a reduced rent from day one, or full rent until the owner re-roofs and a lower rent after that. The second option paid 8% to 36% more up front with one developer and 3.5 to 4 times more with the other. The latter step-down structure favors an owner who may never re-roof but wants the option available.



CONCLUSION: WHAT SHOULD OWNERS KNOW?

$0.05 – $0.31 / W

The re-roof option is not a commodity term. The median developer in our sample valued it anywhere from **$0.05 to $0.31 per watt** in today's dollars, and the most expensive structure is a broad, early right priced into rent from day one. Owners can keep most of the protection while giving up far less rent by aligning the eligible year with the roof's expected life, extending the lease term where the project supports it, or shifting some of the cost to the point of exercise.



02

Focus: key deal terms

Lost Energy Revenue and Roof Replacement, explained for Owners (Hosts), Developers (Providers), Lenders, and Counsel.

[02 • FOCUS: KEY DEAL TERMS]

The terms that transact

Every quarterly issue, we'll explain one or two deal terms clearly so that Owners (Hosts), Developers (Providers), Lenders, and Counsel can work from the same definitions for onsite energy site leases or power purchase agreements. Standardization isn't zero-sum — deals close faster, hold up longer, and protect both sides of the table when terms are clear.

[LAST ISSUE]

Term length
Rent

[THIS ISSUE]

Lost energy revenue
Roof replacement

[DEAL TERM • 03]

Lost energy revenue

What a Host owes a Provider when the system goes dark for a Host-side reason. Most leases define this value using a formula. It's usually larger than the market rate for the electricity that wasn't produced while the system was offline.

What it is

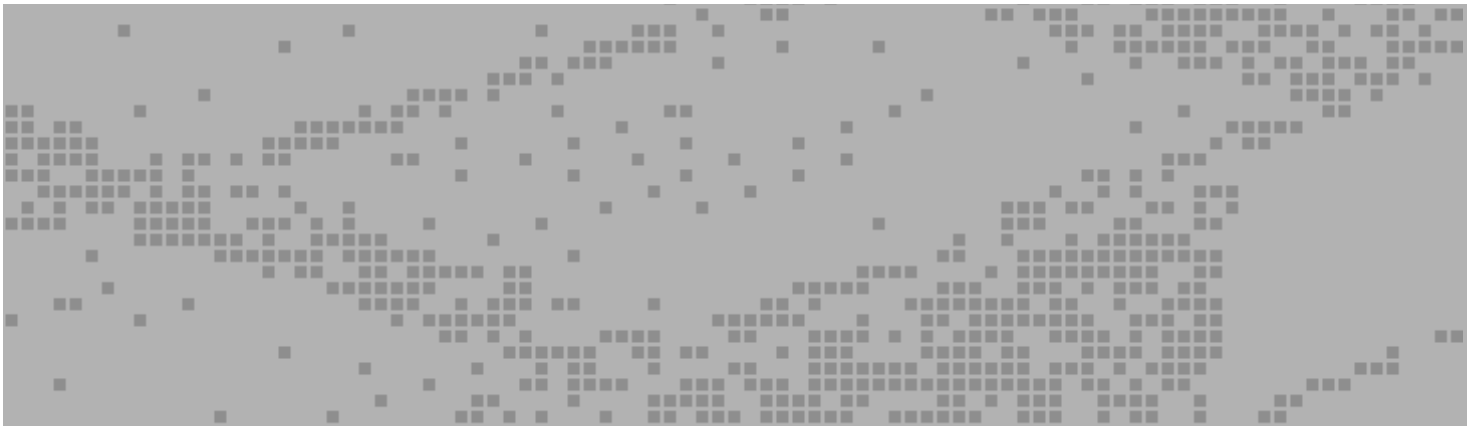
Lost Energy Revenue (LER) is what a Host pays to the tenant (Provider) for electricity generation the system would have produced, but for an interruption the lease assigns to the Host. Some examples include roof repair or replacement, damage caused by the Host or its tenants, a relocation to make room for new rooftop equipment, or a Host default beyond cure. The definition in most leases is defined with three components: the energy revenue itself, the environmental attributes and incentives tied to that generation, and the tax credits the Provider or its financing parties would have claimed, including credits already claimed that become subject to recapture.

Why it matters

Outside of the tax recapture risk, a short outage on a small portion of the system, such as for regular roof repairs, may only cost a few dollars a day in lost electricity revenue, plus the truck roll to remove and restore the panels (at most a few thousand dollars of exposure).

The first 5 years of operation of the project present a much larger LER risk to property owners (Host) because the tax recapture risk to the tenant (Provider) is meaningful if they cease operation during the first 5 years of operation of the project. Brief outages for maintenance or roof repair reasons are not considered ceasing operations, but developers do consider extended outages, such as for a full roof replacement, as a potential tax recapture triggering event. Most leases that define the LER term deem it direct damages rather than consequential damages, removing the limitation-of-liability defense a Host would expect to have, which is why pursuing a full roof replacement or exercising a termination right during those first 5 years of the project is considered prohibitively expensive to the property owner.

Property owners (Hosts) should work to define LER and any annual allowance specifically, so that the LER is not an unbounded indemnity. Four improvements to typical lease language include: a tight causation standard, a mitigation cap, an annual allowance of outage time at no cost, and a claim procedure with a deadline.



What we're seeing in 2026

Most leases will call out the three components of Lost Energy Revenue. The reference for the total lost energy is based on estimates of what production would have been rather than actually metered because the system (or a portion of it) is not producing electricity. When a formula is provided in the lease, the Provider's own estimate is used for LER in year one and then for future years, from the same month the year previous. We also see terms establishing a 90-day claim deadline, payment 30 days after documented notice, and no recovery beyond the date the Provider could have restored operation.

Something worth asking for: an annual free-outage allowance. We've seen about a third of leases carry one, in one of two forms — a bank of a specific number of days of lost production per calendar year, or a kilowatt-hour bank set at roughly 1.0% of expected annual production.

Best-in-class outcome: a defined term, an annual allowance usable for any Host-caused outage including roof work, and a hard mitigation and documentation standard.

2026 Standard: Energy + environmental attributes + tax credits · 90-day claim · 30-day pay

[WHAT'S INSIDE LOST ENERGY REVENUE]

1. **Energy revenue** — PPA, subscription, or bill-credit revenue the system would have earned
2. **Incentive revenue** — environmental attributes, RECs, rebate and incentive payments
3. **Tax credit exposure** — credits foregone, plus recapture of credits already claimed, plus penalties

[WHO PAYS, BY CAUSE]

Cause of outage	Who pays
Routine roof repair	Host, less any allowance
Emergency roof repair	Host, less any allowance
Scheduled re-roof, if within schedule negotiated in lease	Provider absorbs its own
Scheduled re-roof, if not included in lease or outside window defined in lease	Host, from day one past the deadline
Damage by Host, tenants or contractors	Host
Relocation for new rooftop equipment	Host, plus removal and reinstallation, unless allowance negotiated in lease
Host default beyond cure	Host
Casualty	Neither; the casualty article governs

[THE FOUR LIMITERS]

1. **Causation:** "solely caused by," not "arising from."
2. **Mitigation:** nothing beyond the date the Provider could have restored operation.
3. **Allowance:** an annual free-outage bank in days or kilowatt-hours — only a third of leases have one, and it is the most valuable thing to add.
4. **Process:** documentation, a 90-day claim deadline, and waiver if it is missed.

[DEAL TERM • 04]

Roof replacement

Whether a Host can re-roof at all during a 20- to 25-year term, when that right unlocks, and who pays to take the array down, put it back, and cover the revenue lost in between.

What it is

A rooftop lease sits on an asset with a shorter service life than the lease. A commercial membrane roof is warranted for 15 to 20 years; the lease runs 20 to 25 before extensions. So the lease has to answer three questions: whether the Host may replace the roof during the term, when that right becomes exercisable, and who bears the three costs of exercising it — decommissioning and removal, storage and reinstallation, and the Lost Energy Revenue for the days the array is off the roof. Solar leases typically grant an emergency roof replacement right. However, additional replacement options and cost mitigation must typically be negotiated into a tenant's (Provider) standard lease form.

Why it matters

Emergency-only is not a roof plan. Without a scheduled right, the Host either waits for the roof to fail — the most expensive way to replace a roof — or negotiates a one-off accommodation from a counterparty under no obligation to grant one, and pays removal, reinstallation and uncapped Lost Energy Revenue for every day the system is down.

Where the right to replace the roof exists, three variables set its value

The time period during the lease when the right is available — anywhere from the fifth anniversary of commercial operation to a specific later year of the lease term. How long the Host has to finish before the cost obligation flips back to the Host. Who carries removal, reinstallation, and lost energy revenue inside that window.

What we're seeing in 2026

When roofs are new, we see some property owners conservatively build a 1-time option to replace the roof with the tenant (Provider) bearing the cost to remove and reinstall the system as well as Lost Energy Revenue. We also see owners (Hosts) opt to maximize the lease revenue and agree to bear the Lost Energy Revenue and removing and reinstalling the system if a full roof replacement becomes necessary. In cases of a midlife roof, the standard we see is to include a 1-time replacement option with the associated solar system costs born by the tenant (Provider).

In those cases, typical terms include one scheduled roof replacement per term on 60 to 90 days' notice, Host completes the work inside a fixed window — 90-150 days — after which Lost Energy Revenue shifts to the Host, day for day, until the system is back online.

For major roof work outside of a full roof replacement, we see phasing negotiated, so no more than 20% of the array is down at once; seasonal protection, either a blackout in the highest-production months or a requested mid-September to mid-March work window; and a day-for-day extension of the lease term for each day the system is disconnected.

Best-in-class outcome: for solar installed on midlife roofs, an owner right to replace the roof at a date that gives margin for expected end of life of the roof; the Provider bears removal, reinstallation, and its own lost energy revenue; and the clock starts when the array is clear of the deck. Note: the more aggressive the roof replacement provision the greater erosion to the annual lease rate the tenant will provide given the substantial cost to remove and replace the solar system during the term.

2026 Standard: One scheduled re-roof · 90-day notice · Provider bears removal and its own LER · 120-day clock

`[WHEN THE HOST'S RE-ROOF RIGHT UNLOCKS]`

Overlay: a 20-year membrane is at the end of its warranted life at Year 20. A gate at Year 14 leaves a narrow window but maximizes lease income; a gate at Year 5 or 6 gives an owner maximum flexibility on roof replacement but will come at a substantial lease discount.

[THE COMPLETION CLOCK]

90 · 120 · 150

The three completion windows we see, in days. Inside the window the Provider absorbs its own Lost Energy Revenue and the Host pays nothing for downtime. On day 91, 121 or 151 the obligation flips — and from there the Host pays every day until the system is back online, with no cap.

[WHERE THE LEVERAGE IS]

Get a scheduled right written into the lease, not only an emergency right, even if you ultimately decide to carry the risk for the tenant's expense in favor of additional lease income. If the roof during the term is highly likely, negotiate the gating year where you feel comfortable about your options to replace the roof while minimizing the hit to the lease rate. Make sure the time to complete the roof replacement starts when the solar system is completely removed from the roof rather than when the notice is given for the roof replacement. Understand the full consequence of the reroof decision: some forms let the Provider terminate rather than reinstall if the Host re-roofs late in the term.

03

On the near horizon

After a rooftop array fire in Los Angeles, five safety questions to ask developers before you sign.

[03 • ON THE HEAR HORIZON]

The roof question your risk committee is now asking

On September 10, a cold storage operator sued the owner of a 6 MW rooftop solar array and its service contractor over a fire that destroyed a 491,000 square foot building. No official cause has been determined. But the specific areas of risk are enough to inform what you should require in an onsite energy leasing bid.

What is established

The fire started on June 17, 2026 at a cold storage facility on Los Palos Street in Los Angeles. On September 10, the operator, Lineage, filed suit in Los Angeles Superior Court against Altus Power, which owns the rooftop array, and Pearce Services, its maintenance contractor, in a claim reported above $1 billion. Lineage alleges an earlier fire on the same array in August 2024, more than 200 connector failures identified across the array by May 2026, and a written instruction on June 11 not to re-energize the system until safety testing was complete. Both defendants deny responsibility and point out that the investigation is open. The Los Angeles Fire Department, Cal/OSHA and LA Building & Safety investigations were all still open as of this writing.

Focus on the connectors

Warehouses burn for plenty of reasons: NFPA counts an average of 1,508 US warehouse structure fires a year and $323 million in annual direct property damage, with operating equipment as the leading source.

The solar panels themselves were not the main source of fire and thermal-damage incidents in two studies of PV safety; much of the risk centered on the electrical equipment and connections around them. A study by the UK's Building Research Establishment (BRE) National Solar Centre attributed approximately 36% of recorded PV-caused incidents to poor installation. This study included residential projects, which tend to have less 3rd-party engineering reviews than commercial projects. Nonetheless, DC disconnect switches were the most frequently implicated component, and electrical arcing was considered the main ignition mechanism.

In the US, independent inspection firm HelioVolta published a report in March 2026, revised in May, drawing on inspections of more than 500 commercial rooftop systems. The report examined dedicated rapid-shutdown devices installed at the panels as one approach to meeting the National Electrical Code's rapid-shutdown requirements. In its sample, systems with these devices were 66% more likely to have critical safety issues than systems without module-level power electronics. Systems with module-level electronics also had 34% more major and critical connector issues per megawatt.

That is unfortunate, because module-level electronics are roughly 90% of the US rooftop market and they exist to make emergency responders safer. They also multiply the number of DC connections on your roof.

What we ask for instead

Lumen does not sell equipment and we do not own the arrays. We can point you in the direction of what to ask. Starting this quarter, we are asking every provider bidding through Lumen to describe their rapid-shutdown approach, how they ensure only compatible connectors are paired, and what their inspections cover and how often they occur — and we are putting those answers in front of you next to the rent.

Promising safety practices

Looking ahead, we see three promising developments related to safety. The first is UL 3741 is a more recent standard that certifies a hazard-control system rather than a device. UL 3741 satisfies the national electric code (NEC)'s rapid-shutdown requirement without module-level electronics. This means fewer connections on your roof, and fewer things to fail. The second is FM Global's Data Sheet 1-15, fully revised in April 2026; it requires thermographic inspection at energization, again at 14 days, and every three years thereafter. The third is to cap solar array blocks at 150 by 150 feet with four-foot aisles, and provide six feet of clearance to skylights. The questions below ask providers to explain which measures they will include and how those commitments will carry through design, installation, and ongoing operations.

Five questions to ask developers before you sign

[01] **Baseline protection.**

Can I be sure your system will be built with National Fire Protection Association (NFPA) compliance?

[02] **Rapid shutdown equipment.**

For NFPA compliance will your system use module level power electronics (MLPEs) throughout the roof, or will you incorporate a UL 3741 PV hazard control system? If MLPE's describe how you ensure all the extra connector pairing are fire safe.

[03] **Operations and maintenance (O&M).**

Describe the type and frequency of O&M activities related to fire safety that will occur during the life of the project, and which of those activities can be made available to my organization. Specifically, will you include initial and regularly scheduled thermography scanning of all connectors, splices, and terminations? What are my reporting rights on your O&M performance?

[04] **Insurance.**

If the solar installation damages our building or its contents, or interrupts our business or our tenants' operations, whose insurance pays and what are the coverage limits and exclusions?

[05] **Beyond NFPA minimums.**

Are there any additional features or specifications you incorporate for fire safety that go beyond NFPA minimums? Examples include avoidance of DC splices, connector compliance checks, issuing a fire response plan, and use of autonomous fire detection and notification cameras such as the NX Vantage from Nextpower.

At Lumen, we sit on the landlord's side of the table, seeking to ensure the best value for your under-utilized space, while carefully managing risk in real estate.

[WHAT TO TAKE INTO YOUR NEXT LEASE]

Plan for the roof before you sign

Issue 01 showed that developer selection drives the rent. Issue 02 shows that the roof clauses decide how much of that rent you keep. An owner with a midlife roof who signs an emergency-only lease has left a six-figure decision for a sub-optimal moment. An owner who writes in a scheduled right, gates it to the roof's actual life, starts the completion clock when the array is clear, and bounds Lost Energy Revenue, keeps most of the protection and gives up far less rent. The same diligence applies to what goes on the roof: how the system shuts down, how its connections get inspected, and whose insurance pays if something fails.

The roof-ready lease: six asks

Match the date to the roof.

Set the first eligible re-roof year from the roof's remaining warranted life, not the developer's default.

Ask for the math.

Have every bidder show how it priced the re-roof right, and compare those figures side by side.

Price the alternatives.

Request bids with added term and with pay-at-exercise structures before accepting a permanent rent reduction.

Start the clock at removal.

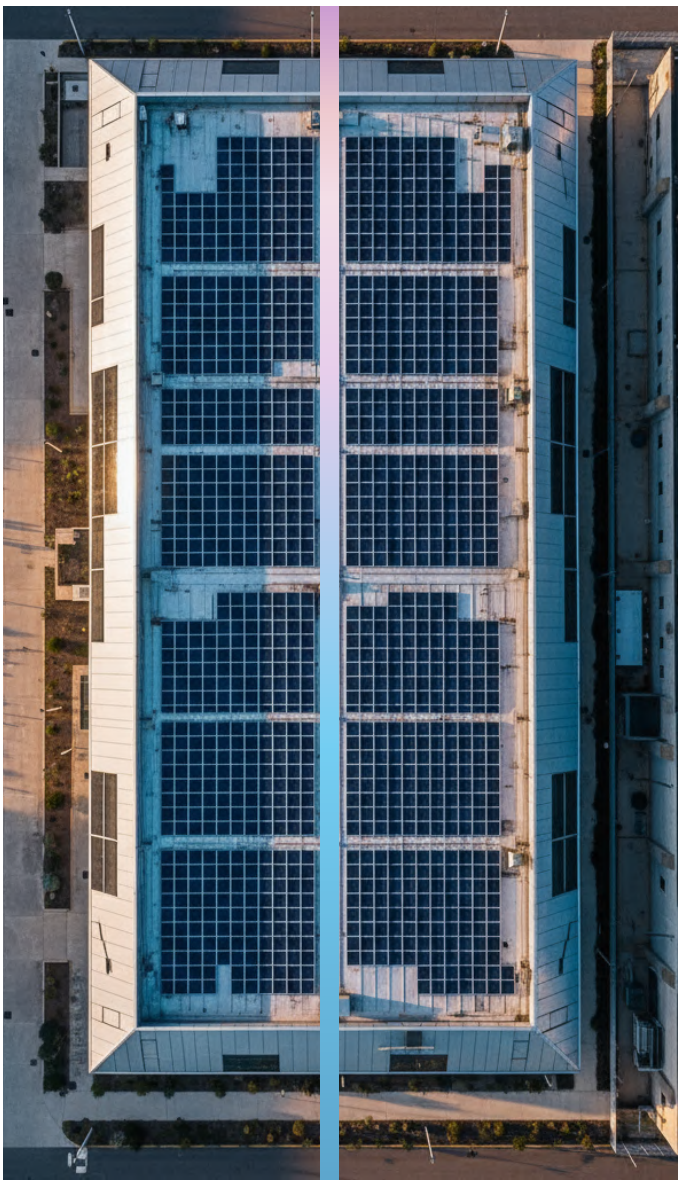
The completion window should run from the day the array is clear of the deck, not the day notice is given.

Bound lost energy revenue.

"Solely caused by" causation, a mitigation cap, an annual free-outage allowance, and a 90-day claim deadline.

Put fire safety in the bid.

Rapid-shutdown approach, thermographic inspection at energization, at 14 days and every three years, and named insurance coverage.



[METHODOLOGY]

How this issue was built

The Lumen Solar Index is built to be transparent, methodologically consistent, and citable.

[DATA SOURCES]

- Matched bid pairs submitted on the Lumen platform between January 2025-September 2026.
- Developer-stated decommissioning and recommissioning estimates, taken from bid notes.
- Deal-term observations from leases negotiated through Lumen in 2026.
- Section 03 draws on public reporting, court filings, and published standards and studies from NFPA, FM, UL, and HelioVolta.

[DEFINITIONS]

- Implied option cost: the rent a developer gives up for the re-roof right, converted to a lump sum in the year the right opens, in $/W.
- Decom/recom: “Decommissioning and recommissioning”, or removal and reinstallation of the solar array.

[LIMITATIONS]

- Bids do not state the exercise probability each developer assumed.
- Section 03 describes allegations in active litigation. No official cause has been determined.
- Forward-looking statements reflect Lumen's analytical view only.