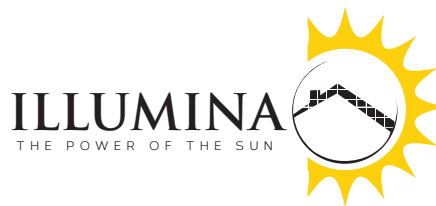


**Physical Location:** Arbor Place, 904 James Gichuru Road, Lavington, Nairobi

**P.O. Box:** 706 00606 Nairobi

**Email:** info@illuminaafrica.com

**Website:** www.illuminaafrica.com



## Solar PV Financing Options

There are a few financing options that can be arranged for commercial solar PV. This includes lease, loan or PPA. The exact type of finance structure available would be dependent on the system size, client/timeline needs, client characteristics, capacity, capital and other factors. It will also be dependent on the available funding in the market at the specific time of the project. Below is an overview of what a client can expect in terms of available options.

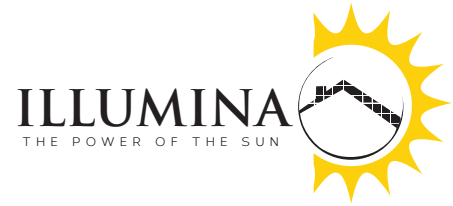
	<b>Cash Purchase</b>	<b>Loan</b>	<b>Lease</b>	<b>PPA</b>
<b>Contract Term</b>	N/A	4-10 Years	4-10 years	12-20 years
<b>Down Payment</b>	Paid in full	30% upfront	\$0 upfront, but option to pre-pay part of lease	\$0 upfront
<b>Tax Benefits (see page 6 for more detail)</b>	Depreciation	Depreciation and interest payments on loan	Depreciation and interest portions if finance lease, otherwise operating lease payments	PPA payments are tax deductible
<b>Interest Rate</b>	N/A	6-9% on USD, 12-13.5% on Kshs	Implied interest rate usually 6-9% on USD, 12-13.5% on Kshs	N/A
<b>Payment Terms</b>	N/A	Fixed, Principal and Interest on reducing balance	Fixed, may have an annual escalator	Pay only for power produced
<b>Monitoring Software</b>	✓	✓	✓	✓
<b>Roof and System Warrantee during installation</b>	✓	✓	✓	✓
<b>Maintenance</b>	O&M contract between client and Illumina Africa	O&M contract between Client and Illumina Africa	Covered: O&M contract between Lessor and Illumina Africa	Covered: O&M contract between PPA operator and Illumina Africa
<b>System Ownership</b>	YOU	YOU	YOU for finance lease, LESSOR for operating lease (may have bargain purchase option at end of operating lease)	PPA operator

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## Leases

Illumina is able to offer leases where our lease partners are satisfied with their due diligence of the client and system proposed.

The lease offered can either be a finance lease (purchase of an asset that is financed with debt) or operating lease (a fixed rental agreement).

**Finance lease** – lessee will add equal amounts to assets and liabilities on balance sheet (equal to lower of the present value of minimum lease payments or fair value). There is a subsequent depreciation expense on asset and interest expense on liability over term of lease. International accounting standards may require that firms must treat leases as capital leases if any one of the following four conditions hold:

1. The life of the lease is at least 75% of the asset's life.
2. The ownership of the asset is transferred to the lessee at the end of the life of the lease.
3. There is a "bargain purchase" option, whereby the purchase price is below expected market value; increasing the likelihood that ownership in the asset will be transferred to the lessee at the end of the lease.
4. The present value of the lease payments exceeds 90% of the initial value of the asset.

All other leases are typically treated as operating leases.

**Operating lease** – Leases where a significant portion of the risks and rewards of ownership are retained by the lessor, are classified as operating leases. Payments made under operating leases are recognized in profit or loss on a straight-line basis over the period of the lease.

An operating or service lease is usually signed for a period much shorter than the actual life of the asset, and the present value of lease payments are generally much lower than the actual price of the asset. At the end of the life of the lease, the equipment reverts back to the lessor, who will either offer to sell it to the lessee or lease it to somebody else.

Operating Lease arrangements also allow firms to take assets off the balance sheet and reduce their leverage, at least in cosmetic terms; in other words, leases are sometimes a source of off-balance sheet financing.

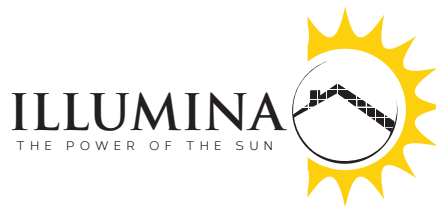
**Combination Lease** – While the differences between operating and financial leases are obvious, some lease arrangements do not fit neatly into one or another of these extremes; rather, they share some features of both types of leases. These leases are called combination leases. This combines some of the features of an operating lease with others from a finance lease

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**Key implications of operating leases vs. finance leases for income statement, balance sheet and cash-flow statements:**

	<i>Effect of Operating Lease</i>	<i>Effect of Capitalized Lease</i>
Assets	Lower	Higher
Liabilities	Lower	Higher
Net Income (in the earlier years)	Higher	Lower
Net income (later years)	Lower	Higher
Total net income	Same	Same
EBIT (operating income)	Lower	Higher
Cash flow from operations	Lower	Higher
Cash flow from financing	Higher	Lower
Total cash-flow	Same	Same

**Key implications of operating leases vs. finance leases on financial ratios**

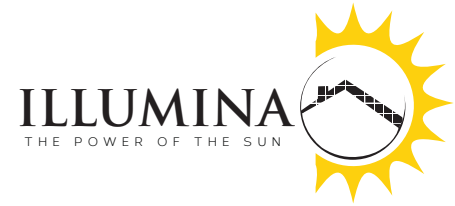
<i>Ratio</i>	<i>Effect of Operating Lease</i>	<i>Effect of Capitalized Lease</i>
Return on Capital	<ul style="list-style-type: none"> <li>Decreases EBIT through lease expense</li> <li>Capital does not reflect leases</li> <li>ROC is higher</li> </ul>	<ul style="list-style-type: none"> <li>Decreases EBIT through depreciation</li> <li>Capital increases</li> <li>ROC is lower</li> </ul>
Return on Equity	<ul style="list-style-type: none"> <li>Net income lowered by after-tax lease expense</li> <li>BV of Equity Unaffected</li> <li>ROE higher earlier years</li> </ul>	<ul style="list-style-type: none"> <li>Net income lowered by after-tax interest expense &amp; depreciation</li> <li>BV of Equity unaffected</li> <li>ROE lower earlier years</li> </ul>
Interest Coverage	<ul style="list-style-type: none"> <li>EBIT(1-t) decreases</li> <li>Interest Exp. unaffected</li> <li>Coverage ratio generally higher</li> </ul>	<ul style="list-style-type: none"> <li>EBIT(1-t) decreases</li> <li>Interest Exp. increases</li> <li>Coverage Ratio generally lower</li> </ul>
Debt Ratio	<ul style="list-style-type: none"> <li>Debt is unaffected</li> <li>Debt Ratio is lower</li> </ul>	<ul style="list-style-type: none"> <li>Debt increases (to account for capitalized leases)</li> <li>Debt Ratio is higher</li> </ul>

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### **Leasing may result in potential benefits such as:**

- A down payment is usually not necessary
- Less restrictive provisions than a typical loan
- Off balance sheet financing – operating leases can result in lower leverage ratios
- Lessee can have option to buy, renew lease, or have system removed at the end of contract
- A lease can usually be turned around faster than a loan
- Leases may not have as stringent credit guidelines as bank financing has
- The (implied) interest rate on a lease will remain fixed where a loan can fluctuate with the market

### **Other Factors to consider (but it will vary based on the lease provider and what they offer):**

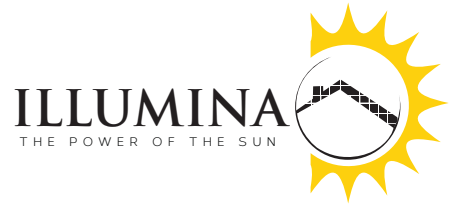
- On an operating lease the lessor is required as the owner of the equipment to bill for monthly sales tax and annual property tax
- A lease generally requires a non-cancelable term. To end lease early you must pay all remaining lease payments
- Lease insurance may be required
- Lease documentation usually has requirements for equipment maintenance and return conditions not found in lending. An O&M contract with Illumina may be mandatory
- There may be late charges on lease payments
- Documentation for lease transactions may require documents not used in lending such as purchase orders, vendor invoices, sales tax remittance forms, acceptance forms, prefunding forms or others
- Usually only the monthly payments, term and end of lease option will report on a lease agreement
- A lease agreement does not show the interest rate like you will find on loan documents (the rate is an implied rate)

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## **Loans**

Illumina also has partners that would potentially be willing to structure a term loan if this fits the client requirements and assuming the lender is satisfied upon their due diligence of the client. Illumina is working with various Institutions to make available incentivized financing available (at 7% interest on the Euro or Dollar and 6-10 year term). If not, the interest rate would be around 9-10% on the dollar and smaller term. Back to back financing is also a good option if you have enough fixed deposits to collateralize loan, as the net interest charge can be as low as 4% on the Kenyan Shilling (the difference between loan rate and deposit rate). For residential, this can be through a home improvement loan or grouped with a commercial finance structure if it is the same owner(s). Illumina is also offering Microfinance solutions and Agriculture specific loans but the exact structure would depend on the client and their banking history.

### **Potential advantages of a loan include:**

- All depreciation-tax benefits that come with owning the equipment
- The NPV of the solar net after-tax savings over the useful lifetime would be higher compared to a lease
- A moratoria period may exist during project set up phase
- Although the interest rate is pegged to LIBOR, historically LIBOR is not very volatile
- If you decide to pay a loan off early, the payoff is usually the principal balance of the loan

### **Other factors to consider (but it depends on which loan provider and what they offer):**

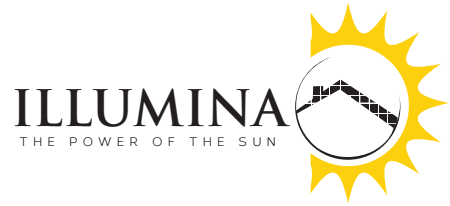
- A loan usually requires down payments of 20-30%
- There will be certain financial restrictions/covenants and additional high quality collateral such as real estate or a lien on business and/or personal assets
- There may be a processing fee, annual fee, advocate fees and/or stamp duties
- An evaluation on repayment ability is performed every 1-3 years
- The financing is FX denominated and so it would be up to the clients to hedge themselves against FX risk if necessary
- Cases where the business earns in FX are beneficial to getting the loan approved faster
- Insurance may be necessary for credit protection
- For loans above a certain amount, some of our partnering loan providers may require a medical to be conducted – but this is free

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## **Tax implications to consider for both loans and leases:**

The effects of leasing an asset on accounting statements will depend on how the lease is categorized by the KRA (for tax purposes) and by IFRS (for measurement purposes). Since leasing an asset rather than buying it substitutes lease payments as a tax deduction for the payments that would have been claimed as tax deductions by the firm if had owned the asset (depreciation and interest expenses on debt), the KRA may be wary of lease arrangements designed purely to speed up tax deductions. Some of the issues that may be considered in deciding whether lease payments are tax deductible include the following:

- Are the lease payments on the asset spread out over the life of the asset or are they accelerated over a much shorter period?
- Can the lessee continue to use the asset after the life of the lease at preferential rates or nominal amounts?
- Can the lessee buy the asset at the end of the life of the lease at a price well below Market (bargain purchase option)?

If lease payments are made over a period much shorter than the asset's life and the lessee is allowed either to continue leasing the asset at a nominal amount or to buy the asset at a price below market, the KRA may view the lease as a loan and prohibit the lessee from deducting the lease payments in the year(s) in which they are made. Our asset leasing specialist partners work with you to formulate the best overall structure.

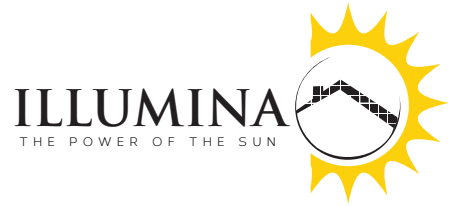
Manufacturers, hotels and lodges: For tax purposes, the entire cost of the solar system can be depreciated over the first year if the system is financed by cash purchase or loan (so this creates a positive cash-flow equal to 30% of the value of the system in the first year). This significantly improves the investment rate of return of the project.

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## **Power Purchase Agreement (PPA)**

For projects above 200kWp, we are able to offer a PPA structure to help generate OPEX reductions immediately. This enables you to offset project execution risk because you can pay only for power produced. Equipment, Financing, Installation, O&M and insurance are all covered under the PPA. We can work to structure a PPA that

PPA Tariffs – A PPA tariff of between 0.09 – 0.13 can be achieved.

- Utility rate Risk – a guarantee on a % reduction in effective PPA tariff vs. utility can protect you in case you believe utility rates will fall. A floor will be incorporated.
- FX risk – we can offset FX risk or a PPA can be structured in Kshs where applicable.

Please note – the terms of the PPA are highly dependent on customer profile and industry, system size, capacity and character factors, installed cost, O&M cost and other factors. Due diligence will be performed to ensure the ability to honour the PPA terms.

PPA's work best for industries that operate 6-7 days, such that an attractive PPA can be structured. There would likely be some sort of Take or Pay arrangement.