

FUSION DEVELOPERS · FUSION AI SOLAR — GOLD & INDIGO ENERGY
ENGINEERING

CONFIDENTIAL SOLAR EXPANSION PROPOSAL

Solar Power Proposal

Venus Pharma

A precision-engineered **+300 kWp** expansion to the existing **300 kWp** installation — approximately **600 kWp** total — engineered against verified 12-month consumption and your JUN 2026 bill.

Prepared

2026-08-03

Reference

FD-SOLAR-LESCO-001-ABS-2026

Customer

3002484 · SHAHPUR

EXECUTIVE DECISION PANEL

The investment case at a glance



Recommendation for the Board: **Proceed with a detailed site survey, then install the +300 kWp addition as a zero-export (self-consumption) block governed by the NeoTAQ AI control & O&M platform.** File LESCO DG-capacity regularisation (204.60 → 400 kW) for the existing plant as a separate compliance item. The verified solar-only saving of **Rs. 10.46M/yr** is independent of any regulatory relief and underpins a ~2.6-year base-case payback. Conditional tax and demand-charge reductions are treated as upside, not as the basis of the investment decision.

Verification status: internal calculation checks passed (capacity reconciliation, module-count × wattage, price-per-watt × capacity, monthly × 12 = annual, capex ÷ saving = payback). All regulatory line items are marked **conditional** and require third-party confirmation.

SECTION 1 · CURRENT ENERGY POSITION

Where the bill actually goes

On the JUN 2026 bill (post-solar), **49%** — Rs. 1,024,553 of Rs. 2,073,424 — was non-energy: fixed demand, E-Tax and F-Tax. Solar and the conditional regulatory levers target precisely this cost pool.



COMPONENT	AMOUNT (RS.)	NOTE
Total Bill	2,073,424	JUN 2026, post-solar
Energy (COE) — 41,567 units	1,048,871	@ 25.23/unit
Fixed (FIX-CHRG)	365,000	Demand charge (MDI based)
E-Tax	238,604	Conditional relief available
F-Tax	56,142	Conditional relief available

COMPONENT	AMOUNT (RS.)	NOTE
All non-energy	1,024,553	49% of bill
DG Capacity	204.60 kW	Subject to enhancement → 400 kW

SECTION 2 · SITE & ROOFTOP ASSESSMENT

Site context and proposed zones

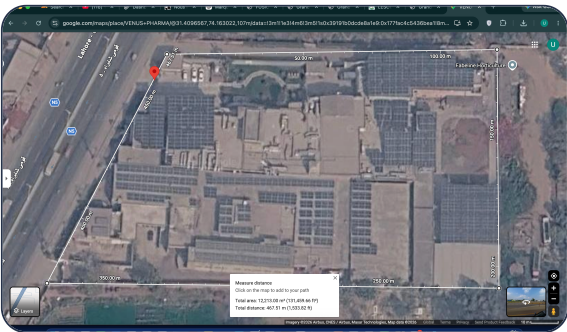


Image: client-provided site view. Layout annotations below are **conceptual** and subject to a detailed site survey.

- Site area: **12,213 m²** (131,460 ft²)
- Perimeter: **467.5 m**
- Existing solar area: **~1,800 m²** (300 kWp, client-confirmed)
- Proposed additional zone: **~1,900 m²** (300 kWp addition)
- Inverter-room: **conditioned indoor room** (conceptual location TBC)
- Cable routing: **rooftop tray → inverter room → main LT panel**
- Maintenance corridors: **1.0 m clear walkway** between rows

Roof loading: structural capacity of the existing PEB 55×77 roof must be verified by a licensed structural engineer before mounting. Not assumed.

Orientation & shading: South-facing array assumed; nearby structures/plant screened during survey. Soiling and seasonal variation modelled at PERFORMANCE_RATIO 0.85.

SECTION 3 · PROPOSED ENGINEERING SOLUTION

System configuration

EXISTING

300

kWp DC · client-confirmed

PROPOSED ADDITION

300

kWp DC · 417 × Trina Vertex N 720W

FINAL SYSTEM

600

~600 kWp DC · 833 modules total

Module	Trina Vertex N 720W, N-type TOPCon, bifacial (conceptual — model TBC pending procurement)
Addition module count	417 × 720 W = 300.24 kWp DC
Total module count	833 modules (~600 kWp DC)
Inverter architecture	String inverters, AC capacity TBC (target DC/AC ratio ≈ 1.15–1.25) · conditioned-room install
String design	~20–22 modules per string (per inverter MPPT) — final after electrical design
Export control	Zero-export by design — total generation (69,120 kWh/mo) stays below site consumption (76,127 kWh/mo), so export ≈ 0. Enforced by NeoTAQ neoSync holding grid export ≤ 0 W (failsafe curtail on comms loss). DG-capacity regularisation (204.60 → 400 kW) is a separate LESCO compliance matter for the existing 300 kWp plant, not a gating requirement for the new block's self-consumption operation.
Monitoring & AI O&M	NeoTAQ neoSphere (Intelligence tier): per-string yield + MDI metering (neoLog), ML anomaly detection (soiling, shading, string faults, degradation), root-cause diagnosis, and natural-language O&M queries; on-site neoView dashboard. Replaces manual monthly inspection for this uptime-critical pharma site.

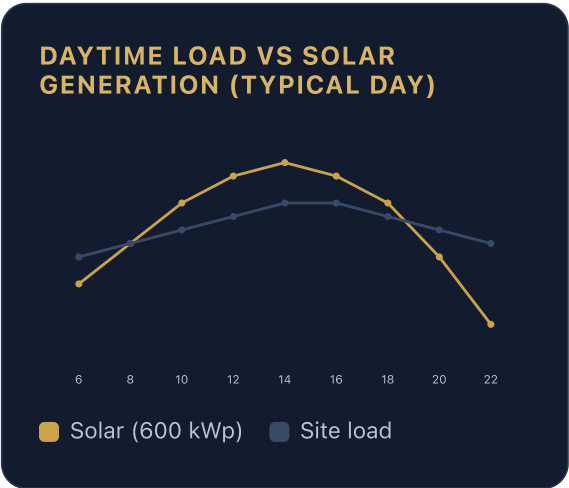
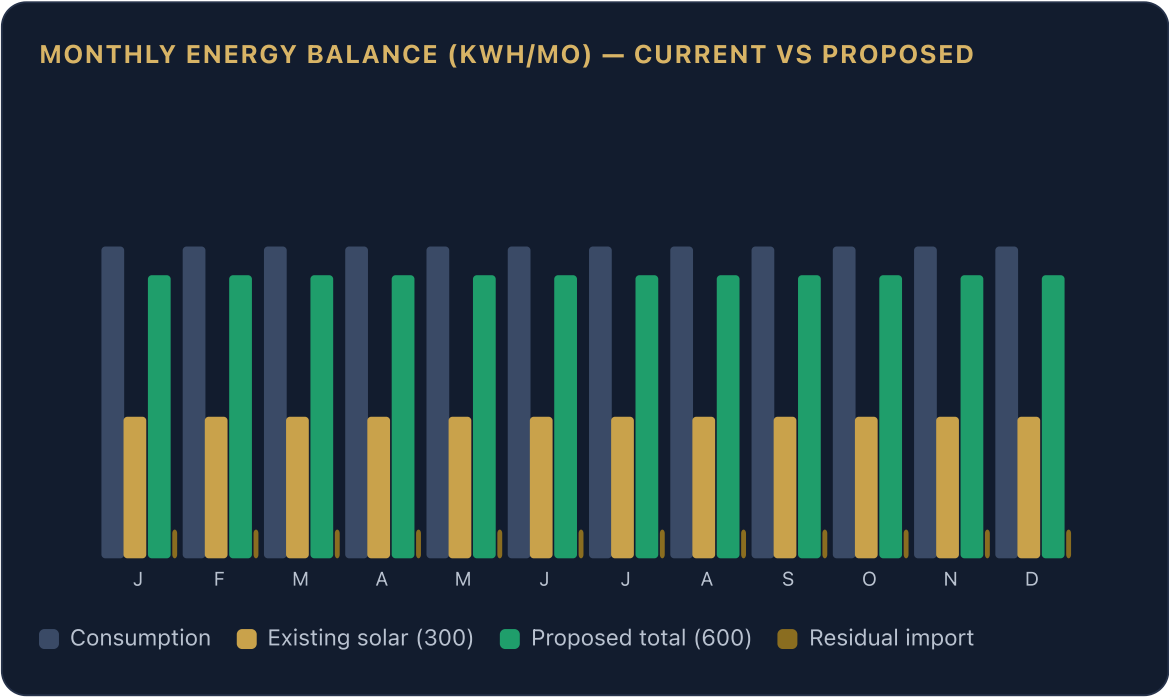
Protection	AC/DC isolation, RCD, surge protection, anti-islanding per IEEE 1547 / local code (TBC)
Earthing & lightning	Array earthing, equipotential bonding, lightning protection per IEC 62305 (design TBC)
Fire & emergency	Emergency shutdown switch at inverter room + remote trip; fire-rated cable routes
Structural assessment	Required — PEB 55x77 roof loading verification by licensed engineer before install

Intelligent Control & AI O&M Platform — NeoTAQ (quoted separately)

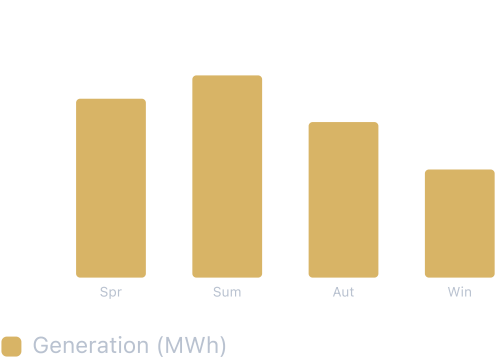
The +300 kWp block is governed by the **NeoTAQ Solar AI stack**: **neoCube** edge controller (NPU, 4G/Wi-Fi 6) running **neoSync** (zero-export control), **neoLog** (per-string metering) and **neoSphere Intelligence** (cloud AI anomaly detection + natural-language O&M), with on-site **neoView**. NeoTAQ is brand-agnostic (Modbus/SunSpec/OPC-UA/MQTT) and unifies the existing 300 kWp + new 300 kWp under one zero-export control + AI layer via delivery partner Green Fuel Energy (Lahore/Islamabad). **This is an optional add-on, priced separately (hardware + per-site/yr SaaS) and does NOT alter the per-watt solar investment above.** Full scope, BOM and RFQ: Desktop/2026/Venus_Pharma_NeoTAQ_300kWp/.

SECTION 4 · ENERGY MODEL

Generation, self-consumption and residual import



Seasonal Generation Pattern



METRIC	CURRENT (300 KWP)	PROPOSED (600 KWP)
Monthly generation (kWh)	34,560	69,120
Annual generation (kWh)	414,720	829,440
Monthly consumption (kWh)	76,127	76,127

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METRIC	CURRENT (300 KWP)	PROPOSED (600 KWP)
Residual import (kWh/mo)	41,567	7,007
Exported / curtailed	0	0 (gen < consumption)
Self-consumption	Partially	All generated units

Export/curtailment shown as zero because total proposed generation (69,120 kWh/mo) stays below site consumption (76,127 kWh/mo). Curtailment would only arise above ~652 kWp total. Figures are model estimates (PSH 4.8, derate 0.80) and require interval metering for final confirmation.

SECTION 5 · INVESTMENT CASE

Standard vs Premium package

ATTRIBUTE	STANDARD	PREMIUM (RECOMMENDED)
Module specification	Trina Vertex N 720W TOPCon (conceptual)	Trina Vertex N 720W TOPCon + priority allocation
Inverter specification	Commercial string inverter	Premium string inverter, enhanced MPPT
Mounting structure	Galvanised PEB-compatible racking	Galvanised + corrosion upgrade
Monitoring	Standard web dashboard	Advanced analytics + alerting
Electrical protection	Standard (RCD, surge, anti-islanding)	Enhanced + redundant isolation
Warranty	Module 12 yr product / 25 yr linear* (TBC)	Module 12 yr / 25 yr + inverter extension (TBC)
O&M	Annual preventive visit	Bi-annual + remote monitoring
Cleaning support	On-request	Scheduled (soiling-aware)
Response time	72 hours	24 hours
Insurance / exclusions	Excludes Acts of God unless endorsed	Optional all-risk endorsement available
Price per watt	Rs. 89 / W	Rs. 99 / W · Rs. 99/W
Total investment (300 kWp add)	Rs. 26,721,360	Rs. 29,723,760
Estimated payback (base)	~2.6 yr	~2.6 yr

*Warranty terms are indicative and subject to manufacturer documentation and final supply agreement. "Premium" is recommended for uptime-critical pharmaceutical operations; both deliver the same verified energy saving.

Optional add-on — Intelligent Control & AI O&M (NeoTAQ): neoCube controller + neoSphere Intelligence (AI anomaly detection, per-string metering, natural-language O&M) + neoSync zero-export control + on-site neoView. Quoted separately (hardware + per-site/yr SaaS via Green Fuel Energy) — **does not change the per-watt solar investment above.** RFQ:

Desktop/2026/Venus_Pharma_NeoTAQ_300kWp/NeoTAQ_RFQ_Venus_Pharma.md.

Optional add-on — Battery Backup / UPS for sensitive equipment (Risen iCon / Fusion AI Solar Systems): if Venus Pharma needs uninterruptible backup for critical loads (cold-chain, HVAC, process lines, lab instruments), add the **Risen iCon SU261E125LM — 125 kW / 261 kWh All-in-One C&I Liquid-Cooled BESS** (Risen OEM; supplied turnkey by Fusion AI Solar Systems). Single cabinet, LFP (314Ah, 260S1P, 832V), 0.5C, 98% DoD, on-grid **and off-grid**, 400Vac 3P4W, IP55, ~2.6 t. Pairs with the NeoTAQ neoSync zero-export controller (or NeoTAQ **neoES** storage layer) for seamless islanding when grid fails. Covers ~2.1 h of 125 kW backup — size multiple units for longer autonomy. **Confirmed price (Fusion AI Solar Systems turnkey quote, 2026-08-03): Rs. 79 / Wh ALL-INCLUSIVE TURNKEY (delivery + installation + commissioning + 1-yr warranty + training) → 261 kWh × 79 = PKR 20,619,000 (≈ Rs. 2.06 crore) per unit.** (261 kWh is ENERGY capacity; unit continuous power = 125 kW — confirm per-Wh vs per-W basis when comparing rival quotes.) Quoted separately (Fusion AI Solar Systems, 0332 2227426 / info@fusionaisolar.com); **does not change the per-watt solar investment above.** Quote + spec sheet:

Desktop/2026/Fusion_Solar/BESS_Vendor_References/Fusion_AI_Solar_Systems/.

Three scenarios, transparently separated

CONSERVATIVE

8.4

Rs. M/yr · PERF 0.85 × self-cons 0.95

Payback ≈ 3.2 yr

VERIFIED BASE CASE

10

Rs. M/yr · solar-only saving

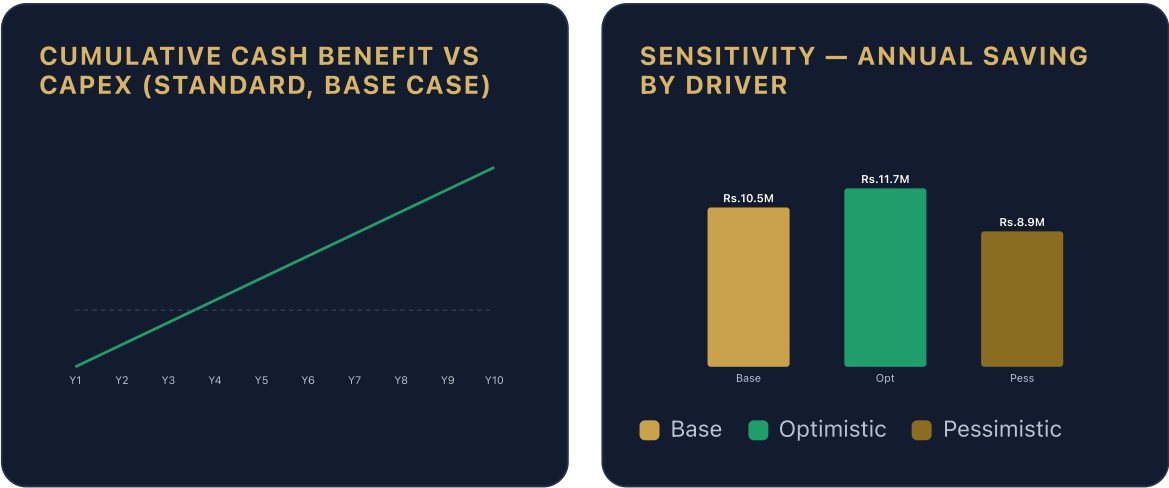
Payback ≈ 2.6 yr

CONDITIONAL UPSIDE

18

Rs. M/yr · + tax & MDI relief

Subject to regulatory approval



SCENARIO	ADDED DC	ANNUAL GEN	SELF-CONS	IMPORT BEFORE→AFTER	ANNUAL NET SAVING	CAPEX (STD)
Conservative	300 kWp	705,024 kWh	669,773	498,804→84,084	Rs. 8.45M	26.7M
Verified Base	300 kWp	829,440	829,440	498,804→84,084	Rs. 10.46M	26.7M
Conditional Upside	300 kWp	829,440	829,440	+ tax/MDI relief	Rs. 17.66M	26.7M

Conditional upside = verified base (Rs. 10.46M) + estimated tax relief (Rs. 3.54M) + estimated MDI reduction (Rs. 3.66M) = Rs. 17.66M/yr. Tax and MDI items are **subject to confirmation** and not included in the guaranteed base-case return.

SECTION 7 · IMPLEMENTATION ROADMAP

Twelve-step delivery path

Durations are preliminary and subject to site confirmation and third-party approvals.

1

Data validation

Confirm 12-month consumption, JUN 2026 bill and existing 300 kWp records. ~1 week

2

Detailed site survey

Rooftop survey, shading, available area, cable routes. ~1–2 weeks

3

Structural assessment

PEB 55x77 roof loading verification by licensed engineer. ~2 weeks

4

Load profiling

Interval metering to confirm self-consumption and MDI. ~2 weeks

5

DG-capacity regularisation & approvals

Existing 300 kWp already exceeds the 204.60 kW DG cap / 179 kW EXP-MDI, so the new block runs zero-export (self-consumption). File DG-capacity regularisation (204.60 → 400 kW) + interconnection for the existing plant as a separate LESCO compliance item. *Subject to LESCO*

6

Final engineering

Electrical design, string layout, protection, drawings. ~2–3 weeks

7

Procurement

Modules, inverters, racking, export device, and **NeoTAQ neoCube controller + neoSphere Intelligence subscription**. ~3–4 weeks

8

Installation

Mounting, DC/AC wiring, inverter room fit-out. ~3–4 weeks

9

Testing & commissioning

Protection tests, **NeoTAQ neoSync zero-export verification (export $\leq$ 0 W)**, neoSphere AI baseline training, performance verification. *~1 week*

10

Monitoring & AI O&M activation

NeoTAQ neoSphere Intelligence live: AI anomaly detection, per-string dashboards, natural-language O&M; baselines set across both 300 kWp plants. *~2 days*

11

Handover

O&M manual, training, documentation. *~3 days*

12

O&M

Preventive visits, cleaning, remote monitoring. *ongoing*

SECTION 8 · RISK & COMPLIANCE

Risk register with mitigations

Roof structural capacity

Verify PEB 55×77 loading before mount; limit array density if required.

Responsible: Structural engineer (Fusion) + Client

Fire safety

Emergency shutdown, fire-rated routes, DC isolation, signage per local code.

Responsible: Electrical engineer

Cable routing

Tray system, separation from services, weatherproof transitions.

Responsible: Installation lead

Lightning & earthing

IEC 62305 LPS, equipotential bonding, surge protection.

Responsible: Electrical engineer

Grid approvals

New block is zero-export by design (gen < consumption); **NeoTAQ neoSync** enforces it. LESCO DG-capacity regularisation (204.60 → 400 kW) + interconnection filed for the existing plant as a separate compliance item.

Responsible: Fusion + Client (LESCO)

Export limitations

NeoTAQ neoSync enforces grid export ≤ 0 W with failsafe curtailment on comms loss; no export assumed in base case (gen < consumption).

Responsible: Controls engineer (Fusion) + NeoTAQ/Green Fuel Energy

Regulatory change

Tariff/Net-metering monitored; contract terms fixed at signing.

Responsible: Commercial / Legal

Module degradation

Modelled at 0.5%/yr (linear); warranty-backed (TBC).

Responsible: OEM / Fusion

Shading & soiling

PERFORMANCE_RATIO 0.85; scheduled cleaning for pharmaceutical site.

Responsible: O&M team

System downtime

Redundant string design, remote monitoring, 24–72h response SLA.

Responsible: O&M team

Warranty conditions

Compliance with install + O&M terms;
documentation retained.

Responsible: Fusion / Client

AI O&M platform (NeoTAQ)

Vendor SaaS availability (neoSphere) +
controller uptime (neoCube). Mitigated by
on-site **neoView** (works offline) + local data
logging (neoLog); Green Fuel Energy local
support (Lahore/Islamabad).

Responsible: Solar Dept (FD-PM-SOLAR) +
NeoTAQ/Green Fuel Energy

Commercial framework

Proposal validity	30 days from issue (2026-08-03)
Taxes	Exclusive of applicable GST/sales tax unless stated; tax relief items conditional
Payment schedule	30% advance · 50% on delivery · 20% on commissioning (indicative, TBC)
Scope inclusions	Design, supply, install, commissioning, monitoring, 1-yr std O&M (Premium: 2-yr)
Scope exclusions	DG enhancement fees, LESCO charges, roof structural upgrades beyond standard, grid connection upgrades
Warranty	Module 12 yr product / 25 yr performance (TBC); inverter per manufacturer
Estimated delivery	~10–14 weeks from survey sign-off (preliminary)
Client responsibilities	Site access, utility liaison, structural records, safe working area
Approval dependencies	LESCO DG-capacity regularisation for existing plant (204.60→400 kW, zero-export basis), structural sign-off, interconnection
Change-order policy	Written variation, repriced, agreed before execution

SECTION 10 · APPROVAL & CONTACT

Next step: commission the survey

[Request Detailed Site Survey](#)

[Request Final Quotation](#)

[Download PDF Proposal](#)

[Fusion Developers Website](#)

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Intelligent Control & AI O&M (NeoTAQ) — integrated: see Engineering Solution (Section 3) and the Implementation Package + RFQ in Desktop/2026/Venus_Pharma_NeoTAQ_300kWp/. Issue the NeoTAQ RFQ (Green Fuel Energy) in parallel with the site survey to keep the ~10–14 week delivery intact.

CLIENT APPROVAL

Authorized representative: _____ Signature: _____

Date: _____

This proposal is confidential and prepared for Venus Pharma. Regulatory savings are conditional and excluded from the guaranteed base-case return until formally confirmed.