

Project Finance & Structuring Advisory

Asset: Local Solar / Island Province Utility-Scale PV Project

Objective: USD 2,000,000 Capital Raise for Phase 1 (2MW) to 10MW Expansion

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1. Executive Summary

The client is seeking to raise **USD 2,000,000** to fund the deployment of a utility-scale solar farm in **Island Province**, Philippines. The project intends to capitalize on grid instability and an explicitly stated government mandate to increase renewable energy share (target 35% by 2030). A 25-year contract with the local utility (**CO-OP II**) is reportedly in place, alongside 15 hectares of secured land.

Key Findings & Recommendations

- Technical Normalization:** Initial client claims of "80% efficiency" have been re-calibrated. Standard PV metrics apply: ~20% Capacity Factor (CF) and ~0.8 Performance Ratio (PR). Output models have been adjusted to reflect global standards.
- Foreign Direct Investment (FDI) Clearances:** Recent regulatory reform (DOJ Op. 21 / DC2022-11-0034) eliminates the 40% foreign equity cap for solar, allowing 100% US ownership of the SPV. However, land control remains strictly lease-based (up to 99 years under recent RA 12252 reforms).
- Dilution Risk is Severe:** Raising USD 2M purely as Venture Capital / early-stage equity against a project of this size will result in excessive dilution. Under risk-adjusted valuation scenarios, founders risk yielding **>60% effective control**.
- Optimal Capital Stack:** We strongly advise abandoning the pure-equity VC route. The project should be structured via an SPV using **Bank-led Project Finance or Sponsor-Backed Bridge Financing** to protect equity control.
- Compliance & Governance:** The presence of politically exposed persons (PEPs) in the development matrix requires immediate, stringent Anti-Bribery/Anti-Corruption (ABAC) controls before institutional or US capital will engage.

2. Project Snapshot & Assets

LOCATION & GRID

Local **City**, Island Province

Substation: CO-OP II Local. Grid experiencing deficit/planned outages.

LAND STATUS

15 Hectares Secured

Sufficient for 2MW Phase 1 and scalable to 10MW+.

OFFTAKE AGREEMENT

25-Year PSA

CO-OP II willing to purchase total output. Target tariff: 7 PHP/kWh.



3. Technical Reality Check: The "80% Efficiency" Clarification

Client documentation referenced an "80% efficiency" expectation. In the context of utility-scale project finance, this terminology is imprecise and will trigger immediate red flags during technical due diligence. We must separate *Module Efficiency*, *Performance Ratio*, and *Capacity Factor*.

- Module Efficiency (~20-23%):** The percentage of sunlight hitting the physical panel that is converted into DC electricity.
- Performance Ratio (PR ~0.80):** This is likely what the "80%" referred to. It measures system losses (inverter inefficiency, wiring, dust, temperature degradation). A PR of 0.8 means the system outputs 80% of what it theoretically could under local weather conditions.
- Capacity Factor (CF ~18-21%):** The most critical metric for financial modeling. It is the actual annual AC energy produced divided by the theoretical maximum if the plant ran at 100% nameplate capacity 24/7. Global averages for sunny regions sit around 20%.

Conclusion: A 1MW plant does not produce 1MW constantly. The provided financial model accurately forecasts ~1,575 MWh in Year 1, which represents a highly realistic Capacity Factor of **17.9%**.

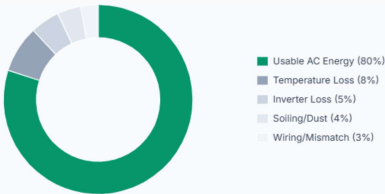
1MW Plant: Nameplate vs Actual Output

Demonstrating the ~18% Capacity Factor impact on a 1MW system.



System Loss Breakdown (Performance Ratio)

Why panels operate at ~80% of their lab-rated DC output in the field.

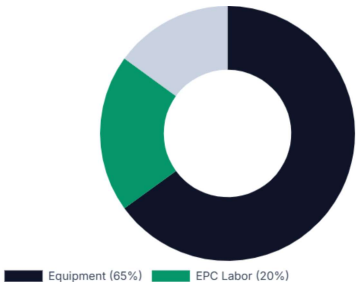


4. Financial Baseline (1MW Model)

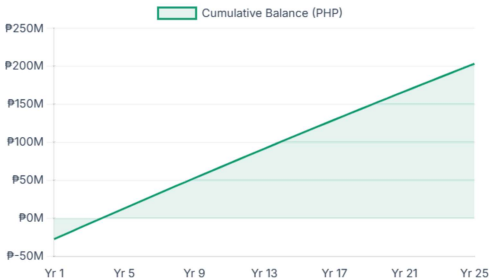
The following figures are derived from the supplied 1MW baseline documentation. For the USD 2M raise targeting a **2MW Phase 1**, indicative figures roughly double, though economies of scale will marginally reduce per-MW CAPEX.

1MW CAPEX ₱38.46M Approx. USD 680,000	1MW O&M / YR ₱769k ~2% of CAPEX	TARIFF ASSUMPTION ₱7.00 Per kWh (CO-OP)	PAYBACK PERIOD Year 4 Based on Net Cashflow
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CAPEX Breakdown (1MW)



Cumulative Cashflow Balance (PHP)



2MW Phase 1 Scalability (Indicative for USD 2M Raise)

Scaling to 2MW requires an estimated CAPEX of ~₱75M - ₱77M (USD ~1.3M). A USD 2.0M (₱112M) capital raise adequately covers hard EPC costs, grid interconnection soft costs, required debt-service reserve accounts (DSRA), and development/legal fees, leaving robust working capital.

5. Foreign Ownership Reform & Land Tenure (US Sponsor)

Historically, renewable energy in the Philippines was subjected to a constitutional 40% foreign equity cap (treating it as the exploration of a "natural resource"). Recent legal shifts have drastically altered the financing landscape for US sponsors.

The Legal Change (DOJ Op. 21 / DC2022-11-0034)

In 2022, the Philippine Department of Justice (Opinion No. 21, s. 2022) concluded that solar, wind, and certain hydro/ocean resources are kinetic energies, not "potential" natural resources. Following this, the DOE issued DC2022-11-0034 amending the RE Act IRR. **Result: 100% foreign ownership is now permitted for Solar RE Contracts.**

Scope Nuance

This 100% ownership applies to Solar. If the client pivots technology (e.g., geothermal or biomass), different constitutional framings and "technical/financial assistance" structures apply.

Regulatory Reality Matrix

✓ WHAT CHANGED

Foreign equity cap lifted. US Citizens / HoldCos can now own 100% of the generating SPV.

✗ WHAT DID NOT CHANGE

Private land ownership (foreigners still cannot own land); DOE contract compliance; ERC PSA approvals; BSP FX/loan registration.

Land Control for Foreign Sponsors: The Leasehold Strategy

Because foreign investors cannot constitutionally own private land, site control remains a strict lease/tenure exercise. Long-horizon bankability relies on securing proper extended leases.

- Baseline (RA 7652):** Historically allowed qualifying foreign investors to lease private land for up to 50 years, renewable once for 25 years (Total: 75 years).
- Updated Reform (RA 12252):** Extends allowable leases for qualifying registered investments to **up to 99 years**.

Advisory Note: Foreign ownership of the project company is now permitted, but site control remains a lease exercise. The 99-year horizon drastically improves debt amortization schedules for infrastructure lenders.

Maximum Allowable Foreign Lease Terms



6. Entity Architecture & DOE Contract Path

To access project finance, the entity and contract architecture must be flawlessly segregated. Banks lend against contracted cashflows, not optimism.

Sponsor Structuring (Bankability View)

The optimal lender-friendly setup is a Philippine project company (SPV / domestic corporation) holding all permits and contracts, which is 100% owned by the US Sponsor / US HoldCo. This keeps the story clean: foreigners own generation, not distribution.

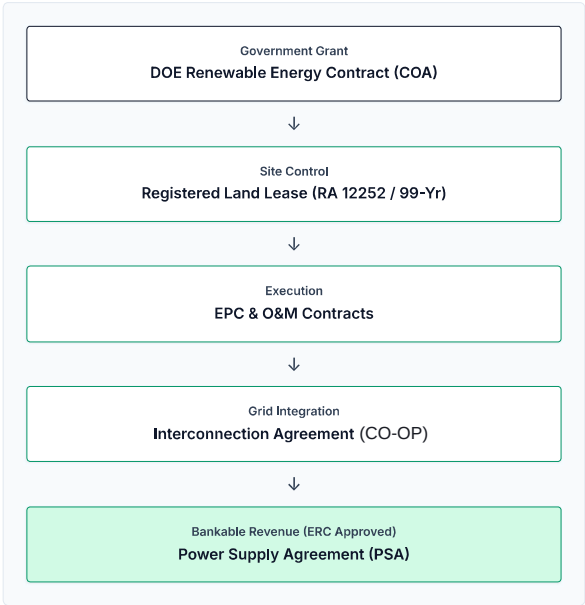
DOE RE Contract Path (DC2024-06-0018)

The DOE's Revised Omnibus Guidelines (June 2024) streamlines development by issuing a **Certificate of Authority (COA)**. This allows developers to secure permits and conduct feasibility studies *before* the formal contract term begins, reducing "dead time" prior to financial close.

Change of Control Restriction

Under the revised guidelines, a change of control at the developer level requires prior DOE approval. Because lenders require share pledges and step-in rights as security, enforcement mechanics must be carefully negotiated around DOE consent conditions.

The "Tight" Contract Stack



7. Financing Pathways (Non-VC Menu)

Infrastructure assets are unsuited for standard Venture Capital. Discounting 25 years of contracted cash flows yields a healthy paper NPV, but institutional VC will apply severe execution risk haircuts resulting in **>60% dilution** for a \$2M raise. Below are the viable legal/financial alternatives for a US Sponsor.

RECOMMENDED 1. PH Bank Project Finance Senior secured debt via local banking system. Requires assignment of receivables, share pledges, mortgages, and DSRA accounts. Pros: Lowest dilution; aligns with long-term infrastructure economics. Cons: Slow execution; immense DD requirements.	FX SENSITIVE 2. Foreign Lender USD Debt Offshore borrowing. Requires BSP registration (BSRD) to legally service the FX loan via the PH banking system. Pros: Deeper USD liquidity; matches USD-linked capex. Cons: Country/convertibility risk; heavy FX reporting discipline.	SPONSOR FIT 3. Asset-Backed Bridge Financing Corporate recourse loan secured by sponsor's existing portfolio (e.g., hotel cashflows) to bridge to bankability milestones. Pros: Fastest path to cash; funds early-stage development risks. Cons: Concentrates risk heavily on sponsor balance sheet.
4. DFI / Blended Finance Institutions like ADB, IFC, or US DFC (highly relevant for US sponsors) offering debt, guarantees, or political risk wraps. Pros: De-risks syndication; excellent terms. Cons: Extremely intense ESG/Integrity DD; slow.	5. Green / Sustainability Bonds Capital markets route utilizing SEC guidelines adopting ASEAN Green Bond Standards. Pros: Large ticket sizes; reputational upside. Cons: Not suitable for single early-stage projects.	6. Gov. Incentives & Tax RE Act framework (VAT zero-rating, 7-year ITH). Not direct financing, but drastically improves DSCR sizing. Pros: Improves returns without equity dilution. Cons: Strict BIR/DOE endorsement compliance.

Financing Profile Comparison

Visualizing the trade-offs between the three most viable initial pathways for the USD 2M Phase 1 requirement. The wider the coverage, the better the performance on that metric.

Note: "Asset-Backed Bridge" assumes sponsor has significant existing collateral (e.g., hospitality real estate) to secure corporate loans rapidly.



8. Legal, Regulatory & Compliance Readiness

Infrastructure finance requires rigorous legal hygiene. Local relationships are advantageous for operations but pose severe compliance risks for institutional and cross-border capital.

CRITICAL FLAG: US Sponsor Integrity Controls & PEPs The pitch deck cites: "His close friend and business partner, the mayor of <i>Dauin</i> will have small parts in the project..." FCPA Exposure: Because the sponsor is a US Citizen, the project holds obvious exposure to US Foreign Corrupt Practices Act (FCPA) enforcement risk. Combine this with local "relationship-driven permitting," and you must run flawlessly clean governance. Undisclosed or informal equity grants to sitting government officials are strict deal-killers. The Mayor's involvement must be completely transparent, legally vetted, at arm's-length, and explicitly cleared by external compliance counsel.	Institutional Compliance Checklist ☐ SPV Incorporation: 100% US ownership verified via DOJ Op. 21 ☐ ABAC Policies Enacted: Gifts/hospitality controls, third-party DD, document retention. ☐ Traceable Procurement: Clean, traceable payments mandated by PH banks' tightened integrity climate. ☐ DOE RESC Awarded (COA issued) ☐ Interconnection Agreement Signed ☐ ERC PSA Approval (Document-heavy consumer protection process cleared)
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9. Execution Plan (Next 90 Days)

Days 1 - 30

- Restructure pitch deck to reflect Project Finance metrics (remove "80% efficiency").
- Clean up governance: Formalize PEP declarations and FCPA legal opinions.
- Engage technical advisor for formal P50/P90 yield study.

Days 31 - 60

- Initiate grid interconnection feasibility study with CO-OP.
- Secure DOE Certificate of Authority (COA) to begin formal permitting.
- Prepare legal data room for SPV and register land lease (aiming for RA 12252 max limits).

Days 61 - 90

- Circulate teasers to regional commercial banks (e.g., BDO, BPI, Security Bank) for project debt.
- Alternatively, execute Sponsor-Backed Bridge documentation using external asset collateral to push project to NTP (Notice to Proceed).

Appendix: Sources & Assumptions

A1. Project Data Sources: Financials, CAPEX (P38.46M/MW), O&M, and Tariff (P7.00/kWh) assumptions are extracted verbatim from the client-supplied document: *"Ground solar power station - 1 MW.pdf"*. Demographic and local operational narratives extracted from *"Blue and White Bold Pitch Deck Presentation.pdf"*.

A2. Technical Benchmarks: Utility-scale default Performance Ratio (PR) of ~0.80 and global average Capacity Factors (~21% global, ~20% sunny-region PV) are based on standard Lazard LCOE methodologies and NREL (National Renewable Energy Laboratory) utility-scale PV baselines.

A3. Policy Context: The Philippine Energy Plan 2023-2050 targets of 35% RE by 2030 and 50% by 2040 reflect official Department of Energy (DOE) mandated pathways.

A4. Legal Frameworks: DOJ Opinion No. 21 (s. 2022) and DOE DC2022-11-0034 cited for foreign ownership relaxation. RA 7652 and RA 12252 cited for leasehold parameters. DOE DC2024-06-0018 cited for COA administration.

A5. Financial Projections Disclaimer: Output forecasts and cash flows presented in Section 4 do not account for complex tax treatments, debt service interest deduction, or local inflation variables. They are base-case visual representations of the supplied 1MW dataset intended for high-level structuring discussions only.