LUMENS

TRANSITIONING INTO A SOLAR PROJECT DEVELOPER & CONSULTANCY

INTRODUCTION

WHY LUMENS IS TRANSITIONING

- Installer market is **oversaturated** and not scalable for massive growth
- We possess the **skills and expertise** needed for large-scale solar project development

ZAMBIA'S SOLAR EXPANSION & LUMENS' ROLE

- Government is aggressively pushing for **1,000MW of solar farms**
- Local expertise is needed for execution - Lumens will fill this gap

LUMENS' NEW FOCUS

- Identifying & developing **bankable solar farm sites** for investment
- Managing **licenses, permitting and due dilligence** to ensure projects are funding-ready
- Still offer **residential & commercial solar**

KEY TAKEAWAY

- Lumens Energy is **ready, willing, and capable** to develop projects beyond Zambia

MARKET OPPORTUNITY & INDUSTRY NEEDS

Energy Deficit & Solar Need

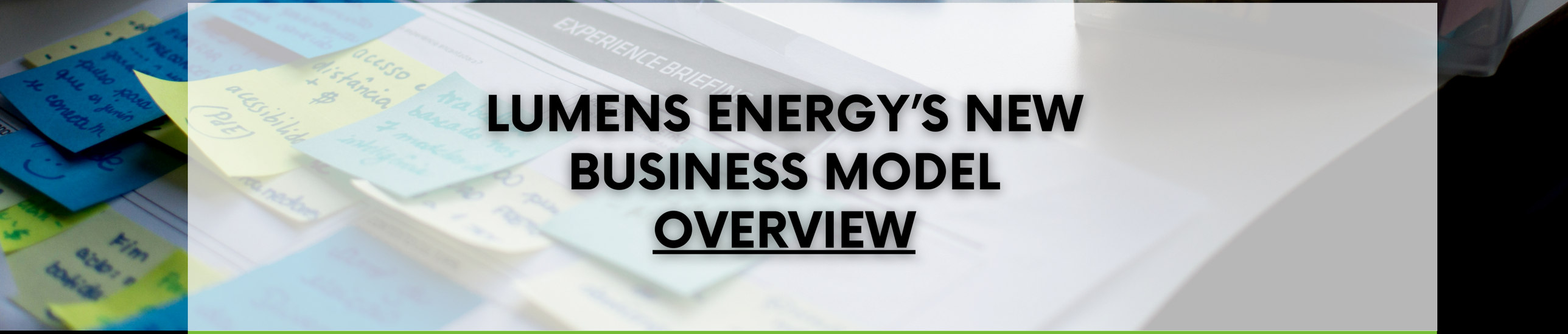
- **Current power deficit:** ~1,400MW due to hydro over-reliance.
- **Goal:** Become a net-exporter of power to neighboring countries.
- **Issue:** Many companies import electricity at higher costs due to shortages.

Challenges Facing IPPs

- **Lack of funding:** Banks are hesitant to finance projects.
- **Bankability issues:** Some IPPs do not meet financing requirements.
- **Regulatory complexity:** Delays in securing approvals & licenses.

How Lumens Will Address These Challenges:

- **Project Development Services:** Helping IPPs become bankable.
- **Direct Engagement:** Working with ZESCO, IPPs, and financial institutions.
- **Funding Support:** Partnering with RAZ and other investors to de-risk projects.
- **End-to-End Development:** Identifying, structuring, and securing financing for new solar projects.



LUMENS ENERGY'S NEW BUSINESS MODEL OVERVIEW

Core Role

- **Core Focus:** Developing large-scale solar projects from concept to financial close.
- **Making Projects Bankable:** Helping IPPs secure funding by improving project viability.
- **End-to-End Project Development:** Identifying land, conducting feasibility studies, securing permits, and preparing projects for acquisition.

Two Approaches to Development

- **Approach A:** Landowner is NOT the off-taker (power sold to grid/wheeling).
- **Approach B:** Landowner IS the off-taker (e.g., factory or mine).

LUMENS ENERGY'S NEW BUSINESS MODEL PROCESS FLOW

Step 1: High-Level Feasibility (+/- 2 Months)

- Third-party funder covers **initial feasibility costs**
- Assess **substation capacity**, available land, potential generation capacity.
- Conduct **tariff analysis, financial viability, projected returns**.
- Provide a cost structure for moving forward to Step 2.

Step 2: Project Development (+/- 12 Months)

- Third-party funder continues to **finance regulatory approvals & development**
- Obtain all **regulatory approvals** (EIA, land subdivision, grid applications).
- Develop **detailed site layout** diagrams & **PVSyst analysis**.
- Engage **off-takers** (ZESCO / Private Offtakers / Energy Traders) & Secure PPA's.
- Structure the project **for financial close & sale to an IPP.**

Step 3: Financial Close & Project Sale

- **IPP acquires project** – Ready-to-build projects are sold to investors/IPP's.
- **Landowner lease fees** – Typically ~1% of project cost.
- Development fees – Lumens earns (e.g., K300K per MW) upon project acquisition.
- Third-party funder's return - Either:
  - Equity in final project (if they opt for long-term returns)
  - Repayment upon sale to an IPP (if they refer a short-term return)

LUMENS' ROLE IN THE ENERGY ECOSYSTEM

How Lumens Engages Key Stakeholders

- **IPP Engagement:** Research & assess non-bankable IPPs to determine **if Lumens' services can improve their case**.
- **Landowner Identification:** Work withdistrict councils to find landowners near **viable substations**.
- **ZESCO Collaboration:** Secure **substation capacity data** to determine grid feasibility.
- **Off-Taker Targeting:** Approach **high-energy consumers with land within a 5km radius** for cost-efficient transmission.

What Makes Lumens Unique in the Ecosystem

- **We Make Bankable Projects:** Integrating financial modeling, risk mitigation, and regulatory approvals from the start.
- **Turnkey Solutions:** Unlike fragmented development approaches; Lumens handles, Site identification & feasibility, Licensing & permitting
- (PPAs) & Investor Engagement
- **Deep Market & Regulatory Knowledge:** Strong relationships with ZESCO, ERB, financiers, ensuring smoother approvals.
- **Strategic Partnerships for Faster Execution:** Access to RAZ (funding), EPCs, and IPPs accelerates project timelines.

"Lumens Energy is the missing link between project feasibility, financial viability, and regulatory approval—ensuring solar projects actually get built, funded, and operationalized faster."

REVENUE MODEL

REVENUE STREAMS

- Existing **Commercial & Residential** Solar Installations (ongoing cash flow).
- **Consulting Fees –** Stage 1 (High-Level Feasibility).
- **Consulting Fees –** Stage 2 (Project Development).
- **Success Fee** upon project sale to an IPP.
- Advisory Services for **IPPs already in development**.
- Future Equity Stakes in Projects (once cash flow allows).
- **EPC Revenue** if Lumens' partners become the IPP.

FEE STRUCTURE

- **Stage 1:** Consulting fees (upfront payment).
- **Stage 2:** Retainer-based model (monthly fees).
- **Success Fee:** Paid upon financial close & project sale.

EQUITY APPROACH

- Future potential for long-term revenue from project ownership.

SKILLS DEVELOPMENT FOR CEO TRANSITION

🔹 **Core Areas of Development:**

Project Finance & Renewable Energy Investments
→ Understanding stakeholders & risk allocation.

Bankability & Risk Mitigation
→ Identifying why projects fail & making them funding-ready.

Financial Modeling for Energy Projects
→ Learning how to evaluate project viability.

Capital Raising & Investor Engagement
→ Structuring deals & securing funding.

Regulatory Frameworks & Policy
→ Navigating energy laws & compliance.

Strategic Business Development
→ Positioning Lumens to attract investors & partners.

Case Studies & Real-World Applications
→ Learning from successful energy projects.

WEAKNESSES & THREATS

Weaknesses
(Internal Challenges Lumens must Overcome)

- **Limited Initial Capital for Self-Funding Development**
  - Currently reliant on third-party funders for early-stage project development.
  - Long-term sustainability depends on securing consistent funding streams or self-financing capabilities.
- **New to Large-Scale Project Development**
  - While Lumens has strong grassroots experience, it is still building credibility in the utility-scale solar sector.
  - Competing with more established international developers may require strategic partnerships.
- **Regulatory & Bureaucratic Delays**
  - Navigating ZESCO, ERB, and local government approvals can be time-consuming and inconsistent.
  - Lack of streamlined permitting processes may slow down project timelines.
- **Dependence on External Partners (Funders & EPCs)**
  - Success depends on maintaining strong relationships with funders, IPPs, and EPC partners.
  - If key partners withdraw, it could delay project execution or impact funding.
- **Need for Continuous Skill Development**
  - Transitioning from Project Manager → CEO requires expertise in finance, strategy, and investor relations.
  - A structured learning path must be followed to stay competitive.

Threats
(External Risks That Could Impact Business Growth)

- **Policy & Regulatory Uncertainty**
  - Changes in Zambian energy policy (e.g., shifts in feed-in tariffs, licensing restrictions) could affect solar project viability.
  - Delays in government approvals may result in missed project deadlines.
- **Market Competition from International Developers**
  - Well-funded foreign developers may enter the market and outcompete local firms.
  - Some international players have direct access to global financiers, making funding more competitive.
- **Economic & Currency Risks**
  - Rising inflation and interest rates may make financing more expensive.
- **Grid Constraints & Infrastructure Limitations**
  - Some substations may lack capacity to accommodate new solar projects.
  - Transmission infrastructure may not be adequate to support energy wheeling at scale.
- **Risk of Non-Bankable IPPs**
  - Some IPPs may fail to secure financing despite Lumens' support.
  - If an IPP defaults or cancels, Lumens may struggle to resell the project to another buyer.
- **Project Development Timelines & Unforeseen Delays**
  - Environmental Impact Assessments (EIAs) and permitting could take longer than expected.
  - Land disputes, policy shifts, or grid connection delays could stall projects indefinitely.

MITIGATION STRATEGIES

1. Financial & Funding Risks:

✅ Secure long-term funding from banks, pension funds, grants, and IPPs looking to invest.

✅ Establish a project development fund to stabilize cash flow.

✅ Negotiate better terms with funders for flexibility in repayments and equity stakes.

2. Market Competition from International Developers:

✅ Position Lumens as a hybrid local & international developer for credibility and speed.

✅ Form joint ventures with international firms to enhance competitiveness.

✅ Leverage existing partnership with RAZ for strategic funding & execution advantages.

3. Policy & Regulatory Uncertainty:

✅ Build stronger relationships with ERB, ZESCO & Ministry of Energy through continuous engagement.

✅ Stay updated on regulatory changes and influence policies where possible.

✅ Structure contracts to protect against policy shifts (e.g., tariff adjustments, approval delays).

4. Economic & Currency Risks:

✅ Negotiate supplier agreements to lock in costs and minimize inflation risks.

✅ Diversify revenue streams (consulting, EPC services, equity stakes) to cushion financial instability.

5. Grid Constraints & Infrastructure Challenges:

✅ Engage ZESCO decision-makers through networking & direct consultations.

✅ Explore hybrid solar + storage (BESS) solutions through partnership with RAZ.

6. Project Development Delays & Bankability Risks:

✅ Pre-screen landowners by selecting sites near substations & offering consultation services.

✅ Conduct thorough due diligence through Solink's expertise in project development.

✅ Obtain pre-approvals from ZESCO & ERB early to avoid regulatory delays.