Commercial RPMs

Reliable Power Microgrids for commercial facilities using at least 2 MWh a month: the offer and terms, decisions, how to assess leads, economics and financing, and customer files.

- NFE Commercial Reliable Power Microgrids
- Commercial RPM decision log
- Assessing a Commercial RPM lead
- Commercial RPM economics and bankability
- Worship Harvest (Commercial RPM customer #1)
- NFE Commercial RPM Finance Glossary

NFE Commercial Reliable Power Microgrids

> **Summary page, current as of 21 October 2026.** Owner: Aaron Tushabe. The detail lives in the pages linked below. The 18 Sep "Team Review Pack v0.1" this page used to hold is in its revision history.

What it is

A Commercial Reliable Power Microgrid (RPM) is NFE's Energy as a Service offer for commercial facilities. NFE designs, finances, installs, owns and operates the battery, inverter, solar, metering and controls behind the facility's power supply. The customer buys electricity per kWh at the applicable ERA Code 10.2 time-of-use tariff, the same rate it pays UEDCL, with reliability included and no equipment to buy. It can choose to buy the system from year 5.

NFE adds no premium for reliability. Its return comes from solar: kWh that NFE's panels supply directly in the daytime, and solar stored in the battery for the 18:00–24:00 peak, replace grid electricity NFE would otherwise buy at the same tariff it sells at.

The offer: current terms (set 6 Oct 2026)

These were agreed for the Worship Harvest proposal and are the model the funders' pitch describes.

Term	Position
Energy price	The applicable ERA Code 10.2 time-of-use tariff per kWh. Applicable taxes are shown separately.
Reliability	Included in the energy price. No separate reliability fee.
Upfront cost to the customer	None. NFE funds and owns the equipment.

Term	Position
Minimum monthly payment	From commissioning, the greater of the actual metered energy charge or 50% of the reference monthly energy charge agreed after Phase 1. It replaces a lower bill and is never added on top. Service-performance credits apply if NFE fails to deliver.
Utility account	NFE prefers to manage and pay the customer's UEDCL bill and issue one consolidated energy bill. The customer decides during Phase 1. Formal transfer of the account only if needed.
Regulatory approval	ERA certificate of registration for the microgrid.
Ownership	Optional purchase from year 5 ("Ownership stage"), subject to agreed terms.
Not yet standard	Contract term (15 years in the first proposal), deposit, SLA wording, tariff indexation and early termination. See the open questions below.

Why each term was chosen: Commercial RPM decision log.

Who it is for

Monthly consumption	Fit	What to do
Below ~1.5 MWh	Below the preliminary economic threshold	Generally outside the target
1.5–2 MWh	Marginal	Assess selectively
2–3 MWh	**Meets the screening threshold**	**Target for assessment**
3 MWh and above	Stronger candidate	Prioritise

Beyond volume, good candidates use most of their electricity in the day and evening (shoulder and peak periods), pay their utility bills reliably, and have roof or ground space for solar. Typical targets: churches, schools, clinics, hotels, offices, supermarkets and small factories. Facilities that run generators for reliability are especially good fits, because replacing the diesel adds to the customer's savings.

How to screen, size and check the margin on a lead: Assessing a Commercial RPM lead.

How a Commercial RPM is delivered

Phase	What happens	Typical timing

1. Measure & Manage	NFE submeters the facility at 15-minute intervals or finer, ideally after the grid/generator changeover so generator-supplied load is captured. We learn peak demand, evening, Sunday and event loads, outages and generator use, and agree the reference monthly energy charge. The customer decides whether NFE takes over the UEDCL bill.	Usually 3 months
2. Reliable Power	NFE installs the battery, the inverter, enough solar to pay for the reliability, and its metering and Microgrid Manager platform. Energy billing and the minimum payment start at commissioning.	Installation 3–6 months after the load and outage profiles are confirmed
3. Energy Optimization	NFE adds solar or storage and tunes dispatch as demand and outages change, so the grid and generator become secondary sources.	Ongoing
4. Ownership (optional)	The customer may buy the system from year 5 at a buyout set in the contract. The price must at least clear any outstanding project debt.	From year 5

These phases adapt NFE's Microgrid Cultivation Blueprint for commercial customers. In customer documents, call phase 4 the "Ownership stage" so it isn't confused with step 4 ("Install and commission") of the delivery plan.

Why the economics work

- **Commercial Phase 2 is a right-sized battery for reliability plus enough solar to pay for it.** Solar isn't needed to get through an evening outage, but at tariff parity NFE earns little on grid electricity it simply passes through. Solar is what funds the reliability.
- **The battery works every day.** Solar charges it in the daytime and it supplies the 18:00–24:00 peak (UGX 666.5/kWh). If the grid fails in the evening, the battery keeps doing what it was already doing.
- **Worship Harvest base case** (6.9 MWh/month; 120 kWh battery, 50 kW inverter, 40 kWp solar): about UGX 34.8m a year of grid purchases avoided, about UGX 24.5m a year of cash flow after maintenance, admin and a battery and inverter replacement reserve, and about a 15% project return over 15 years. CAPEX is a range of UGX 120–145m until we have EPC quotes. Worship Harvest is one of the larger sites we expect to build; most commercial sites are planned at 30–80 kWh of battery.
- **Financing works with shilling debt at 12% or less over 10 years or more** (debt service cover of about 1.6–1.9x). Ordinary commercial bank debt at 18–19% does not work well. Target concessional or climate finance, and later a portfolio vehicle (SPV).

Assumptions, sensitivities and financing structures: Commercial RPM economics and bankability.

Where things stand (21 Oct 2026)

- **Worship Harvest**, the first commercial customer: the proposal (with the company profile) and a one-page summary for their leadership went out on 6 Oct. Next step: Worship Harvest agrees to start Phase 1. See Worship Harvest.
- **Website:** the Products section presents Residential RPMs (50–500 residents) and Commercial RPMs (at least 2 MWh/month) under "Energy as a Service, not another equipment project" (since 1 Oct).
- **Strategy:** NFE plans to build more commercial than residential microgrids (2 Oct). The Roadmap doesn't show this yet.
- **Funders' pitch:** a revision presenting Commercial RPMs as the near-term expansion priority alongside Residential RPMs is in draft (v0.1, 21 Oct). The provisional raise is **US$500,000** to target ten new RPMs over about 18 months, seven commercial and three residential (Funding target). Deployment milestones still need settling before the web page changes.
- **Competition:** Sawa Energy sells lease-to-own solar and storage. See Sawa Energy's Bellavista proposal.

Open questions

1. **Reliability promise.** Hours of backup, availability %, or both? What the SLA covers and how service credits work.
2. **Tariff mirroring.** Which UEDCL charges we mirror (fixed or service charges, VAT) and how tariff changes flow through to the customer.
3. **Hardware.** Commercial customers and EPCs may expect SMA- or BYD-class equipment (Hillary, 12 Sep). Our CAPEX benchmarks use budget-brand retail prices, so we need a C&I hardware scenario.
4. **Thresholds.** The 1.5 and 2 MWh/month thresholds came from the first, lighter model. Re-run them with the bankability model's replacement reserve and the 50% minimum payment.
5. **Financing.** Which lenders (for example UDB's climate finance facility), how much debt on early projects, and when to set up a project or portfolio SPV. Shilling borrowing is likely to get dearer after the 14 Oct rate rise (Macro outlook).
6. **Standard term sheet.** Deposit, early termination payment, site access, insurance and the year-5 buyout method.
7. **A shared model.** The calculations so far live in a ChatGPT conversation. Build a spreadsheet the team can use and check.

Related pages

- Commercial RPM decision log
- Assessing a Commercial RPM lead
- Commercial RPM economics and bankability
- Worship Harvest (Commercial RPM customer #1)
- NFE Commercial RPM Finance Glossary
- Sawa Energy's Bellavista proposal (benchmark)
- Funding target: ten Reliable Power Microgrids (Oct 2026)
- Business Models for the NFE Microgrid OS
- Team discussions: NFE checkin 12/09/2026 and NFE Checkin 18/09/2026

Source: Aaron's ChatGPT working session "Commercial RPM Modeling" (18 Sep–21 Oct 2026) and the check-ins above. Last reviewed 21 October 2026 by Aaron Tushabe.

Commercial RPM decision log

> Decisions about the Commercial RPM model, newest first. When the team decides something, add a row at the top. Don't rewrite old rows: if a decision changes, add a new row and say which one it replaces. Current terms in one place: NFE Commercial Reliable Power Microgrids. Owner: Aaron Tushabe.

Date	Decision	Why	Who / where
21 Oct 2026	**Fundraising target (provisional): US$500,000** of total programme capital to target ten new RPMs over about 18 months: seven Commercial and three Residential (70% commercial, within the 60–80% range). US$550,000 if we want room for a fourth residential site. *Replaces the US$650,000 working estimate from earlier the same evening.*	Sized to deploy about ten microgrids with a commercial majority. The first estimate used Worship Harvest's scale for every commercial site.	Aaron set the scope; budget worked up in his ChatGPT session. See Funding target
21 Oct 2026	**Planning assumption:** Worship Harvest (~120 kWh) is one of the larger Commercial RPMs, not the typical size. Budget most commercial sites as smaller (30–40 kWh, ~US$15,000 installed) or medium (60–80 kWh, ~US$25,000).	Aaron's expectation of the commercial pipeline.	Aaron
21 Oct 2026	The funders' pitch will present Commercial RPMs as NFE's near-term expansion priority alongside Residential RPMs, with Worship Harvest kept anonymous. Draft v0.1 is in review. The web page stays unchanged until the fundraising amount and deployment milestones are set.	NFE's growth plan has shifted toward commercial customers.	Aaron

Date	Decision	Why	Who / where
6 Oct 2026	**Price:** ERA Code 10.2 time-of-use tariffs, with applicable taxes shown separately. Reliability is included; no separate reliability fee.	"Reliability baked in" is the pitch. A fee would change the offer.	Aaron, after a teammate's review of the Worship Harvest proposal
6 Oct 2026	**Minimum monthly payment:** from commissioning, the customer pays the greater of the actual metered energy charge or 50% of the reference monthly energy charge agreed after Phase 1 submetering. The baseline kWh is fixed in the contract and tariff changes adjust its value. It replaces a lower bill and is never added on top. Service-performance credits apply if NFE fails to deliver. *Replaces "no hard minimum" (18 Sep).*	Pure pay-as-you-use left NFE with all the volume risk for 15 years. A 50% floor gives lenders some revenue protection, while the customer's use can fall a long way before it applies.	Aaron
6 Oct 2026	**Utility account:** NFE prefers to manage and pay the customer's UEDCL bill and issue one consolidated energy bill. The customer decides during Phase 1. Formal account transfer only if needed. If the customer keeps paying UEDCL directly, agree a reconciliation so they aren't charged twice.	One bill is simpler for the customer, and NFE has to be the billing layer to capture the solar margin.	Aaron
6 Oct 2026	**Approvals:** the ERA requirement is a certificate of registration for the microgrid. *Replaces the broader "confirm licensing, registration or exemption" wording.*	Sets out the one approval NFE needs.	Aaron
6 Oct 2026	**Ownership wording:** customer documents say "Optional purchase from year 5 (Ownership stage), subject to agreed terms", not "Phase 4".	"Phase 4" clashed with step 4 ("Install and commission") of the delivery plan.	Aaron, on a teammate's suggestion

Date	Decision	Why	Who / where
6 Oct 2026	**Savings illustrations** use the customer's historical weighted Code 10.2 tariff (Worship Harvest: UGX 567.1/kWh) plus assumed 18% VAT (UGX 669.2/kWh). The UGX 800/kWh figure is dropped. Sunday demand will come from Phase 1 submetering.	The proposal priced energy at the tariff but illustrated savings at UGX 800, which nothing explained.	Aaron, after a teammate's review
2 Oct 2026	NFE's roadmap will include more commercial than residential microgrids.	—	Aaron
2 Oct 2026	**Phase 1** (load and outage monitoring) normally lasts 3 months. Installation follows 3–6 months after the load and outage profiles are confirmed.	Size each microgrid from measured data.	Aaron
2 Oct 2026	NFE's platform is called **Microgrid Manager** in all documents, not MicroPowerManager.	NFE now uses Microgrid Manager.	Aaron
1 Oct 2026	The website Products section shows two products: Residential RPM (50–500 residents) and Commercial RPM (at least 2 MWh/month). Customer-facing pages leave out internal economics and financing. Headline: "Energy as a Service, not another equipment project".	Prospects need to know whether they fit and what to prepare before contacting us.	Aaron
19 Sep 2026	Pursue Worship Harvest, but treat the financial and engineering figures as unvalidated until reviewed. Peak demand is the biggest gap: meter after the grid/generator changeover, capture generator and event loads, and add avoided diesel to the model.	Worship Harvest runs a 200 kVA generator on Sundays and for events, so its bills understate both demand and the value at stake.	Team, check-in
18–19 Sep 2026	Screen commercial leads at **≥2 MWh/month** (≥3 MWh is stronger). Preliminary.	Modelled break-even was about 1.5 MWh/month; 2 MWh leaves room for downside cases.	Aaron's model; team check-in

Date	Decision	Why	Who / where
18 Sep 2026	**Commercial Phase 2 = a battery for reliability + enough solar to finance it.**	At tariff parity, solar is what pays for the reliability.	Aaron's model; confirmed at the 19 Sep check-in
18 Sep 2026	Fund the battery and inverter replacement reserve explicitly in the model (lenders won't accept a generic % of CAPEX). Present Worship Harvest CAPEX as a range (UGX 120–145m; UGX 140m in the model), not as "UGX 143m".	UGX 143m was a conservative modelling number, not a quote.	Aaron
18 Sep 2026	Commercial RPMs keep NFE's Energy as a Service model: per-kWh billing at utility-tariff parity, NFE owns and runs the equipment, four phases with an ownership option. Not an equipment lease like Sawa's, but borrow Sawa's "set it and forget it" risk allocation and predefined buyout.	Keeps the offer simple: pay for power, not power equipment.	Aaron
12 Sep 2026	Explore a commercial/industrial model as an adjacent opportunity, without distracting from the residential/community strategy. *Superseded by the 2 Oct shift toward commercial.*	A business with a predictable UGX 4–5m monthly bill could fund a system from its existing energy spend.	Team, check-in

Source: Aaron's ChatGPT working session "Commercial RPM Modeling" (18 Sep–21 Oct 2026) and the linked check-ins.

Assessing a Commercial RPM lead

> How to decide whether a commercial facility is worth a Phase 1 proposal, and how to do a first-pass Phase 2 sizing and margin check from its utility bills. The results are screening estimates, not quotes. Worked example: Worship Harvest. Owner: Aaron Tushabe.

1. Ask the prospect for

- ☐ Utility bills for the last 12 months (at least 4), showing kWh by time-of-use period. UEDCL commercial bills split peak (18:00–24:00), shoulder and off-peak.
- ☐ An account statement or payment history for the same months
- ☐ Operating hours, including evenings, weekends and events
- ☐ Critical loads that must stay on in an outage, and how outages affect them today
- ☐ Generators: size, when they run, and monthly fuel and maintenance spend
- ☐ Roof or ground space for solar, and who owns the premises (a landlord would have to agree)
- ☐ Peak demand in kW or kVA, if they know it
- ☐ Who decides, and who signs

The website lists the same items under "Before you reach out", so many prospects will already have them.

2. Screen

Check	Pass	Worship Harvest
Monthly consumption	≥2 MWh/month (≥3 is stronger; 1.5–2 is marginal)	~6.9 MWh
Load shape	Most kWh in shoulder and peak periods, when solar and storage can serve them	81% shoulder + peak

Check	Pass	Worship Harvest
Payment record	Bills cleared within each billing cycle	Cleared every month, June–August
Site	Space for the solar; ownership of the premises clear	Owns its premises
Extra value	Generators run for reliability (diesel the RPM can replace)	200 kVA generator all day on Sundays

A facility that uses most of its electricity at night is a weaker fit even at high volumes, because solar can only reach that load through a much bigger battery.

3. Read the load from the bills

1. For each bill, note peak, shoulder and off-peak kWh. Average them to a typical month and work out each period's share.
2. **Weighted tariff** = (peak kWh × peak rate + shoulder kWh × shoulder rate + off-peak kWh × off-peak rate) ÷ total kWh
3. **NFE energy revenue at tariff parity** = the same sum per month, before VAT
4. If recent bills or payments are rising, run a second case at the recent level.

Code 10.2 rates used so far (Q3 2026, before VAT): peak UGX 666.5/kWh, shoulder 562.1, off-peak 429.7. ERA reviews tariffs every quarter, so check the current schedule before each proposal.

4. First-pass Phase 2 sizing

Evening energy (E) = peak-period kWh per month ÷ 30. This is what the battery must cover for six hours from 18:00.

Battery, nominal kWh = E × 1.15 ÷ (0.90 × 0.95) ≈ E × 1.35 (15% reliability reserve, 90% usable depth of discharge, 95% inverter efficiency)

Inverter, kW. Bills show energy, not instantaneous demand. Allow generous headroom over the average evening load (E ÷ 6 hours), check against large motor loads and the size of any generator, and confirm the real peak kW in Phase 1 before buying.

Solar, kWp. Enough to charge the battery for the evening peak and serve daytime load directly, without counting on export. Estimate output at 1,500 kWh per kWp per year (conservative for Uganda).

- Solar needed to supply the peak through the battery ≈ annual peak kWh ÷ 0.90 (round-trip efficiency)

- The rest of the solar output offsets shoulder kWh directly, up to the facility's shoulder consumption
- Solar beyond what peak + shoulder demand can absorb needs export arrangements or load growth

5. Check the margin

1. **Avoided grid purchases** per year = (peak kWh supplied from the battery × peak rate) + (solar kWh used directly × shoulder rate)
2. **Cash flow (CFADS)** = avoided grid purchases − routine O&M (~1.5% of CAPEX) − NFE monitoring, billing and admin (UGX 1.2m per site) − battery and inverter replacement reserve (~5% of CAPEX in the Worship Harvest case)
3. **RPM margin per kWh** = CFADS ÷ the customer's annual kWh
4. **Capital recovery needed** per year = CAPEX × r ÷ (1 − (1 + r)^−n). At NFE's 15% target over 15 years the factor is 0.171. CFADS should at least match it, with room to spare.

In Sep 2026, a 120 kWh / 50 kW / 36–40 kWp system cost an estimated UGX 120–145m on budget-brand retail prices. Benchmarks and caveats: Commercial RPM economics and bankability.

6. Add the customer's side of the case

The customer pays the same per kWh, so its savings come from what the RPM removes: diesel and generator maintenance, generator rentals for events, UPS and backup equipment, staff time spent managing backup, and outage losses. None of this is NFE revenue, but it often decides the sale. Worship Harvest spends about UGX 900,000 on diesel every Sunday (UGX 46.8m a year).

7. Decide and propose

- If the lead passes the screen and the margin covers capital recovery with room to spare, propose Phase 1 on the current terms.
- Phase 1: submeter after the grid/generator changeover at 15-minute intervals or finer for about 3 months, covering normal days, evenings, weekends, events and generator periods. Then redesign Phase 2 from the measured data.
- Present system sizes and CAPEX as indicative until Phase 1 and EPC quotes are done.

Worship Harvest in numbers

Step	Result
Average month	6,912 kWh: 2,017 peak / 3,565 shoulder / 1,330 off-peak (29% / 52% / 19%)
Weighted tariff	UGX 567.1/kWh, so revenue of UGX 3.92m/month (UGX 47.0m/year) before VAT
Evening energy	67 kWh a night on average; 88 kWh at the August run-rate
Battery	88 × 1.35 ≈ 118 → **120 kWh** (about 103 kWh usable, or ~17 kW for 6 hours)
Inverter	**50 kW** three-phase, for headroom over an average evening load of 11–15 kW. The 200 kVA generator means Phase 1 must confirm this.
Solar	The first model needed ≥32 kWp for a 15% return; with the full replacement reserve, **40 kWp** gives ~15%. Around 46 kWp, solar covers all peak + shoulder demand.
Avoided grid purchases (40 kWp)	24,207 kWh of peak via the battery + ~33,100 kWh directly against shoulder ≈ **UGX 34.8m/year**
CFADS	34.77 − 2.14 O&M − 1.20 admin − 6.91 replacement reserve = **UGX 24.5m/year** (~UGX 296 per kWh sold)
Capital recovery at 15% over 15 years	UGX 140–143m × 0.171 ≈ UGX 24.0–24.4m/year, so a project return of about 15%

Limits of this method

- It uses monthly and annual averages. Real use varies from day to day, so less solar is used on cloudy or quiet days. Move to an hourly model once Phase 1 data exists.
- The ≥2 MWh/month threshold came from a lighter version of this calculation (smaller replacement reserve). Treat it as a screen, not a guarantee of profitability.
- Utility bills don't show generator-supplied consumption, such as Worship Harvest's Sundays.

Last reviewed 21 October 2026 by Aaron Tushabe.

Commercial RPM economics and bankability

> The numbers behind the Commercial RPM: where NFE's margin comes from, the Worship Harvest Phase 2 model, the customer-size threshold, and how a project can be financed. These are internal screening figures, not quotes or investment commitments. Model built 18 Sep 2026; terms updated to 21 Oct 2026. Owner: Aaron Tushabe.

Summary

- NFE charges the utility tariff, so its margin is **the grid electricity it no longer has to buy**: solar used directly in the daytime, and solar stored for the 18:00–24:00 peak. The margin sits inside the customer's existing price, not on top of it.
- **Worship Harvest base case** (120 kWh / 50 kW / 40 kWp; CAPEX modelled at UGX 142.8m): revenue UGX 47.0m/year, avoided grid purchases UGX 34.8m/year, **cash flow available for debt service (CFADS) UGX 24.5m/year, project return (IRR) about 15%** over 15 years.
- Financing works with **shilling debt at 12% or less over 10 years or more** (debt service cover, DSCR, of 1.6–1.9x). At ordinary commercial rates of about 18–19%, DSCR falls to about 1.25x and the equity return to about 10%.
- First projects: **50–55% debt**, a 6-month debt service reserve, and a 15-year customer contract. Later, pool sites into a portfolio SPV.

Terms are defined in the NFE Commercial RPM Finance Glossary.

1. Where the margin comes from

RPM margin per kWh = (customer revenue − grid purchases − RPM operating costs) ÷ kWh sold

- Grid electricity NFE passes through at the same tariff earns nothing.
- Solar used directly replaces shoulder-rate grid electricity (UGX 562.1/kWh).
- Solar stored in the battery and used in the evening replaces peak-rate electricity (UGX 666.5/kWh), after about 10% round-trip losses.

- The battery cycles every day, so reliability, solar shifting and peak avoidance all come from the same asset.
- NFE has to be the billing layer for the facility's electricity. If the customer kept paying UEDCL for normal grid power and bought only backup power from NFE, this margin would not exist.

Charging the battery from the grid off-peak to sell at peak adds a little, but it is not the investment case (see Business Models for the NFE Microgrid OS).

2. Model structure

Customer → Load → System → Dispatch → Economics → Financing

- **Customer:** tariff, monthly bill, generator costs, outage frequency and cost, credit quality
- **Load:** annual and monthly kWh, peak/shoulder/off-peak split, maximum kW, critical kW, interval profile
- **System:** solar kWp, battery kWh and kW, inverter kW, CAPEX, useful life
- **Dispatch:** solar used directly, battery throughput, grid and generator kWh, curtailed solar, unserved energy
- **Economics:** revenue, energy costs, O&M, replacement reserve, CFADS, project IRR
- **Financing:** debt share, rate and tenor, DSCR, debt service reserve, equity IRR, buyout schedule

There is no shared spreadsheet yet; the calculations so far were done in Aaron's ChatGPT working session.

3. Base assumptions

Assumption	Base value	Validate with
Customer tariff	Applicable Code 10.2 time-of-use tariff. Q3 2026, before VAT: peak 666.5, shoulder 562.1, off-peak 429.7 UGX/kWh. Q4 2026 reportedly unchanged.	ERA schedule at each proposal date
Load (Worship Harvest)	82,940 kWh/year; 29% peak / 52% shoulder / 19% off-peak	12 months of bills and Phase 1 interval data
Solar yield	1,500 kWh/kWp/year (a Soroti solar plant averaged ~1,670)	Site-specific PV simulation
Battery	90% round-trip efficiency; 90% depth of discharge	Supplier datasheet and warranty
Inverter efficiency	95%	Datasheet

Assumption	Base value	Validate with
Reliability reserve	15% on battery sizing	SLA definition
Routine O&M	UGX 2.14m/year (~1.5% of CAPEX)	O&M quotes
NFE monitoring, billing and admin	UGX 1.2m per site per year	NFE operating costs
Battery and inverter replacement reserve	UGX 6.91m/year (~5% of CAPEX)	Warranty terms, cycle life, replacement prices
CAPEX	UGX 120–145m (model run at 142.8m)	At least two EPC/vendor quotes
Contract term	15 years; no residual value; no export income	Contract
Tariff escalation	None (real terms)	Indexation clause
Target project return	15%	Investment decision

4. Worship Harvest results

Energy flows (40 kWp)

Flow	kWh/year
Customer consumption	82,940
Solar production (40 kWp × 1,500)	60,000
Peak load supplied through the battery	24,207
Solar used directly against shoulder load	~33,100
Grid purchases replaced	~57,300
Grid purchases remaining	~25,600
Share of consumption met by solar and battery	~69%

Cash flow (bankability model, 40 kWp)

Item	UGX m/year
Customer energy revenue, before VAT	47.0
Grid electricity NFE still buys	(12.3)
Avoided grid purchases (gross margin)	**34.77**
Routine O&M	(2.14)

Item	UGX m/year
NFE monitoring, billing and admin	(1.20)
Battery and inverter replacement reserve	(6.91)
CFADS	**24.52**
CFADS per kWh sold	~UGX 296
Project IRR, 15 years, before financing	~15.1%

Solar size sensitivity (first, lighter model)

Solar	CAPEX (UGX m)	Annual contribution (UGX m)	Margin per kWh (UGX)	15-year IRR
32 kWp	135.5	23.4	282	15.2%
36 kWp	139.1	26.7	322	17.5%
40 kWp	142.8	30.0	361	19.6%
~46 kWp	148.6	35.2	425	22.6%

The first model combined O&M and replacements at 2.5% of CAPEX. The bankability model funds battery and inverter replacement explicitly, which lowers the 40 kWp return from about 19.6% to about 15.1%. The "around 20%" return discussed at the 19 Sep check-in came from the first model.

5. Customer-size threshold

The model was scaled to hypothetical customers with Worship Harvest's load shape, sizing the battery, inverter and solar for each and checking the 15-year return (first, lighter model):

Monthly consumption	Result at the 15% target
1.0 MWh	Below target
1.25 MWh	Below target
~1.5 MWh	About 15% (break-even ~1,490 kWh/month)
2.0 MWh	Attractive (for example ~30 kWh battery, 15 kW inverter, ~12 kWp solar)
3.0 MWh	Strong
5.0 MWh	Very good

Downside case	Break-even consumption

Base	~1.49 MWh/month
Solar yield 1,350 kWh/kWp	~1.68
CAPEX +15%	~2.09
Required return 20%	~2.24
Reliability reserve 30%	~1.64
Site overhead UGX 2m/year	~1.81

Several reasonable downside cases land near 2 MWh/month, which is why it became the screening threshold. **Caveat:** these runs used the lighter replacement assumption. Re-run them with the bankability assumptions and the 50% minimum payment before treating 2 MWh/month as firm.

6. Financing

Structures compared

CAPEX UGX 142.8m, CFADS UGX 24.52m/year, 10-year loan with level annual repayments:

Debt share	Rate	Debt service (UGX m/year)	DSCR	Equity IRR
60%	12%	15.16	1.62x	~15.7%
60%	18.7% (commercial bank)	19.54	1.25x	~10%
50%	18.7% (commercial bank)	16.28	1.51x	~11%
60%	10%	13.94	1.76x	~17.4%
60%	8%	12.77	1.92x	~19.2%
55%	12%	13.90	1.76x	~15.6–16.0%
50%	12%	12.64	1.94x	Not calculated

Equity IRR treats the 6-month debt service reserve as cash tied up for the term. In the 60% / 12% case, LLCR is about 1.62x and PLCR about 1.95x.

Rates context: Bank of Uganda reported weighted shilling lending rates of about 18.7% in Q4 2025, and shilling loans averaged 17.9% in August 2026. On 14 Oct 2026 the Central Bank Rate rose from 9.75% to 12% (Macro outlook), so commercial debt is likely dearer now. That strengthens the case for concessional finance.

Volume risk (60% debt at 12%)

Useful energy vs today	CFADS (UGX m)	DSCR
Base	24.52	1.62x
−5%	22.78	1.50x
−10%	21.04	1.39x
−15%	19.30	1.27x
−20%	17.56	1.16x

A lender wanting DSCR of at least 1.30x needs about 86% of today's throughput (about 5.95 MWh/month). At 50% debt, a 20% drop still leaves about 1.39x. The 50% minimum monthly payment (agreed 6 Oct) adds a revenue floor. **This table hasn't been re-run with it yet.**

Recommended structure for the first projects

Item	Position
Debt	50–55% of CAPEX, shilling, 10 years or more, 12% or less
Equity (NFE and investors)	45–50%
Debt service reserve (DSRA)	6 months of debt service
Customer contract	15 years
Customer deposit	About 2 months of electricity bills
Minimum payment	50% of the reference monthly energy charge (agreed 6 Oct)
Early termination	Payment covering outstanding debt, demobilisation and a defined share of unrecovered investment
Export income	None in the base case

At 55% debt: debt UGX 78.5m, equity plus DSRA about UGX 71m, debt service UGX 13.9m/year, DSCR 1.76x.

Capital stack to aim for

- 50–60% concessional or project debt at 8–12% in shillings, over 8–10 years or more
- 30–40% NFE and investor equity
- 0–20% climate grant, guarantee or first-loss capital

One candidate is Uganda Development Bank's Climate Finance Facility, which describes concessional debt, equity, guarantees and grants, and supports solar mini-grid projects. Once 5–10 sites have an operating history, pool them in a portfolio SPV (for example 20 sites × UGX 150m ≈ UGX 3bn) with portfolio-level DSCR and a central reserve. Lenders prefer that to financing one site

at a time.

7. Ownership option and buyout

The year-5 purchase price must at least repay the outstanding senior debt and any prepayment costs, plus the NFE residual value agreed at signing. Outstanding debt in the 60% / 12% / 10-year case:

End of year	Senior debt outstanding
3	UGX 69.2m
5	UGX 54.7m
8	UGX 25.6m
10	0

8. Cash-flow waterfall

1. The customer pays NFE for metered electricity (or the minimum payment).
2. NFE (or the SPV) pays for grid electricity and other energy costs.
3. Routine O&M and operating costs are paid.
4. The battery and inverter replacement reserve is funded.
5. What remains is CFADS.
6. Scheduled senior debt service is paid.
7. The debt service reserve is topped up if needed.
8. The rest goes to NFE and equity investors.

9. Risks and mitigations

Risk	Mitigation
Customer uses less electricity	50% minimum monthly payment; lower debt on early sites; credit review; early termination payment
Tariff changes	Mirror the Code 10.2 structure; define indexation in the contract
Late or missed payments	Payment history, deposit, remote metering, clear default procedures, a diversified portfolio
Battery and inverter replacement	Explicit reserve, manufacturer warranties, standard equipment, remote health monitoring

Risk	Mitigation
Solar or storage underperforms	Conservative yield, commissioning tests, reserve margins
Peak demand underestimated	Phase 1 metering after the grid/generator changeover; size the inverter from measured kW
Regulatory	ERA certificate of registration for the microgrid before operation
Construction	Competitive quotes, fixed-price scope where possible, acceptance tests, EPC warranties
Currency	Equipment is priced in dollars; the shilling has fallen about 12% this year (Macro outlook)

10. Equipment cost benchmarks (Sep–Oct 2026)

Item	Price	Source and caveat
61.44 kWh high-voltage LFP battery (Felicity)	~UGX 32.77m incl. VAT	Uganda retail listing, Sep 2026
50 kW three-phase hybrid inverter (Felicity)	~UGX 14–15m	Uganda retail listings, Sep 2026
580 W solar module (Felicity)	~UGX 405,000 (~UGX 700/W)	Uganda retail listing, Sep 2026
600 W mono solar module	UGX 370,000 (~UGX 617/W), VAT not shown	Muden Systems quote, 19 Oct 2026 (page)
Packaged 120 kWh / 50 kW / 55 kWp C&I system	~UGX 144.69m incl. VAT	Uganda retail listing, Sep 2026
Packaged 60 kWh / 50 kW / 26.4 kWp system	~UGX 96m	Uganda retail listing, Sep 2026
Protection, changeover, mounting, cabling, switchgear	~UGX 8–12m	Estimate
NFE metering, controls and installation	~UGX 6–9m	Estimate
SRNE equipment for a ~120 kWh / 60 kW / 40 kWp system	~US$30,750, before the remaining installation costs	NFE's SRNE wholesale price list (Uganda), 23 Jul 2026

These are budget-brand retail prices. Hillary pointed out on 12 Sep that commercial customers and EPCs may expect SMA- or BYD-class equipment, so get quotes for that too. Dollar-priced equipment follows the shilling within weeks.

Installed planning allowances used for the Oct 2026 funding target: about US$15,000 for a smaller commercial site (30–40 kWh), US$25,000 for a medium site (60–80 kWh) and US$45,000 for a Worship Harvest-scale site (~120 kWh), each including solar, inverters and installation.

Worship Harvest is one of the larger sites, not the typical one. See Funding target.

How the Worship Harvest CAPEX moved: UGX 118m in the first estimate (~28 kWp) → UGX 135.5m (32 kWp) → UGX 142.8m (40 kWp, with more conservative installation, project and contingency allowances). Present it as UGX 120–145m until EPC quotes arrive.

11. Before an investment decision

- ☐ Replace CAPEX with at least two EPC quotes, including an industrial-grade option
- ☐ 12 months of bills plus Phase 1 interval data, including generator-supplied load
- ☐ Site-specific solar simulation
- ☐ Lender term sheets (rate, tenor, minimum DSCR, reserve requirements)
- ☐ Re-run the threshold and volume-risk tables with the 50% minimum payment
- ☐ Move from annual averages to a monthly or hourly dispatch model
- ☐ Never quote the IRR, DSCR or 2 MWh threshold without the assumptions behind them; they are outputs of this model, not constants

Source: Aaron's ChatGPT working session "Commercial RPM Modeling" (18 Sep–21 Oct 2026). Last reviewed 21 October 2026 by Aaron Tushabe.

Worship Harvest (Commercial RPM customer #1)

> Customer file for Worship Harvest, NFE's first Commercial RPM prospect. **Stage: proposal sent 6 Oct 2026; Dansturn meets the Apostle on 3 Nov to ask for Phase 1 (monitoring).** NFE lead: Aaron Tushabe. Point of contact on the ground, and introductions to decision-makers: Dansturn Kimbowa. Last updated 2 Nov 2026.

Next steps

- ☐ Dansturn meets the Apostle (3 Nov): ask permission to install NFE monitoring and share weekly reports, then propose a solution from the data
- ☐ Prepare the alternatives with costs: voltage stabilisers, the generator, UEDCL fixes, a move to Code 20 (Dansturn)
- ☐ Check whether Worship Harvest qualifies for Code 20 rather than Code 10.2
- ☐ Check the roof areas of both towers and the church against the panels needed (Aaron)
- ☐ Worship Harvest leadership decides on the proposal and Phase 1
- ☐ Phase 1: install NFE submetering after the grid/generator changeover (15-minute data or finer) for about 3 months
- ☐ Measure Sunday and event demand, peak kW/kVA and generator run hours
- ☐ Worship Harvest decides whether NFE manages and pays its UEDCL bill
- ☐ Agree the reference monthly energy charge (this sets the 50% minimum)
- ☐ Get at least two EPC quotes for the redesigned system, including an industrial-grade option
- ☐ Obtain the ERA certificate of registration for the microgrid before installation
- ☐ Attach the final proposal PDF and leadership summary to this page

The site

- A church and community facility. Worship Harvest owns its premises, so no landlord is involved.
- UEDCL commercial customer on the Code 10.2 time-of-use tariff.
- Runs a **200 kVA diesel generator all day on Sundays**, even when the grid is up, so services aren't interrupted. This costs about **UGX 900,000 per Sunday** (about UGX 3.9m a month, UGX 46.8m a year).
- Brings in extra generators for large events, with temporary wiring to outdoor tents, LED screens and sound systems.
- Because the generator supplies Sundays, the utility bills understate the facility's real consumption.
- Two towers and the church, joined together. Panels could go on the other tower's roof as well as the church's.
- Apartments on site, around 40% occupied, sometimes with only four in use.
- Building work on the top apartments, and roof leaks they've been raising with the contractor for some time.

Pain points and how to approach them (check-in, 2 Nov 2026)

From Dansturn, who knows Worship Harvest from the inside. Source: NFE Checkin - 02/11/2026.

- **Expensive backup.** In an outage the 200 kVA generator runs the whole building, even when the only load is a few apartments. The cost comes up in the budget.
- **Voltage problems.** Over-voltage and flickering lights start the generator automatically. The facilities manager then calls Dansturn to find a UEDCL technician to change the transformer tap. Dansturn puts it down to the many roadside food vendors on the same supply, with lights of around 200 W and chip fryers of around 2 kW.
- **Sundays cost several times more.** Dansturn estimates about UGX 6M a month to UEDCL (in line with August's UGX 6.25m bill), or 1.5M a week, plus about UGX 900k for the generator each Sunday. Aaron: the weekday cost is just what power costs. What stands out is paying about UGX 1M for one day, at least four times the price, on Sundays.
- **Irregular income.** A church that runs on collections won't want to commit upfront capex. No upfront capex is the whole offer, so this works for us.
- **They value data.** They already produce performance reports, with ChatGPT's help, so weekly outage and consumption reports should land well. Agreed pitch: ask permission to install monitoring, share weekly reports, then propose. Weekly reports keep them engaged, but we need the longer window to show the patterns aren't one unusual week.
- **They'll compare alternatives.** A church member at Knight Frank recommended voltage stabilisers. Customers often want to know the options before saying yes, so show the alternatives (stabilisers, the generator, UEDCL fixes), what they cost, and why ours is better. Stabilisers bring their own losses.

- **Tariff.** Dansturn thinks they could qualify for Code 20. Aaron: that could be the first step in fixing their power.
- **Ownership.** A church that values long-term sustainability may like owning the system eventually. The proposal's optional purchase from year 5 speaks to that.
- **Timing.** Listen for reasons the timing might be wrong, such as the building work or the roof leaks, rather than pushing.
- **Decision-makers.** The Apostle first. The facilities manager and the chief architect / project manager follow, and Dansturn expects those to be formalities once the Apostle agrees.

Electricity use from the UEDCL bills

Four bills from the first half of 2026: Jan–Feb, Mar–Apr, Apr–May and May–Jun (the Feb–Mar bill is missing).

Bill	Peak kWh (18:00–24:00)
Jan–Feb	~1,665
Mar–Apr	~2,249
Apr–May	~2,107
May–Jun	~2,048

Average month	kWh	Share	Code 10.2 rate (UGX/kWh)	Value before VAT
Peak	2,017	29.2%	666.5	UGX 1.34m
Shoulder	3,565	51.6%	562.1	UGX 2.00m
Off-peak	1,330	19.2%	429.7	UGX 0.57m
Total	**6,912**		**567.1 weighted**	**UGX 3.92m/month (UGX 47.0m/year)**

Payment record (UEDCL account statement): the June bill of UGX 4.18m was cleared by 26 June, July's UGX 4.92m by 22 July, and August's UGX 6.25m by 15 August, leaving a small credit. The rising invoices suggest consumption is growing (roughly 7.3 MWh in July and 9.3 MWh in August, estimated from the amounts), so the 6.9 MWh/month base case may be conservative. If that run-rate holds, NFE revenue would be about UGX 4.3–5.3m a month.

Proposed system (indicative, before Phase 1)

Component	Proposal
Battery	120 kWh LFP
Inverter	50 kW three-phase hybrid
Solar	40 kWp (36–40 kWp range)
Metering and control	NFE metering and Microgrid Manager
Reliability target	At least 6 hours across the 18:00–24:00 peak
CAPEX	UGX 120–145m (the model uses UGX 140–143m)

Sizing risk (Hillary, 19 Sep): a 50 kW inverter may be far too small if Sunday and event loads come near what the 200 kVA generator supplies. The proposal ties ending routine generator use to measuring Sunday demand in Phase 1.

Scale: Worship Harvest is expected to be one of NFE's larger Commercial RPMs, not the typical size. The Oct 2026 funding target budgets US$45,000 installed for a site of this scale. That is above the UGX 120–145m model CAPEX (roughly US$29–35k), leaving room for a complete deployment.

See Funding target.

What we offered (proposal of 6 Oct 2026)

- No upfront equipment cost; electricity at the applicable Code 10.2 tariff with reliability included
- Minimum monthly payment of 50% of the reference energy charge agreed after Phase 1
- NFE's preference to manage and pay the UEDCL bill (one consolidated bill), with Worship Harvest deciding during Phase 1
- ERA certificate of registration for the microgrid
- Phase 1 monitoring for about 3 months; installation 3–6 months after the load and outage profiles are confirmed
- A 15-year term and a deposit as proposed terms; optional purchase from year 5 (Ownership stage)
- NFE company profile appended, with NFE letterhead and watermark throughout

Sunday savings. The proposal's savings illustrations price replacement electricity at UGX 669.18/kWh (the UGX 567.1 historical weighted tariff plus assumed 18% VAT) until Phase 1 measures Sunday use. Example at 500 kWh per Sunday:

	UGX
Generator spend per Sunday	900,000

	UGX
Replacement electricity from NFE	334,590
Saving per Sunday	565,410
Saving per year (52 Sundays)	~29.4m

Economics for NFE (internal)

- Revenue of about UGX 3.92m a month before VAT on the 6.9 MWh base case
- CFADS about UGX 24.5m a year; project return about 15%; at 55% debt and 12%, DSCR about 1.76x
- Detail: Commercial RPM economics and bankability

Documents

Document	Date	Where
Proposal (PDF and Word), with the NFE company profile	6 Oct 2026 (latest version)	Made in ChatGPT; attach the final PDF to this page
One-page summary for Worship Harvest leadership (PDF)	6 Oct 2026	Made in ChatGPT; attach to this page
UEDCL bills (4 photos) and account statement	Received 18 Sep 2026	Store the originals in Nextcloud and link them here

History

Date	What happened
18 Sep 2026	Bills and statement received; first Commercial RPM model and Phase 2 sizing built from them
19 Sep 2026	Team check-in: model promising but unvalidated; Sunday and event generator use came to light; peak demand is the main gap
1 Oct 2026	Proposal drafted with the company profile, letterhead and watermark
2 Oct 2026	Sunday generator cost added; roadmap section removed; premises ownership, Microgrid Manager and the Phase 1 timeline corrected

Date	What happened
6 Oct 2026	Teammate review handled (tariff basis, 50% minimum, UEDCL bill, ERA registration, Ownership stage wording); one-page leadership summary made
17 Oct 2026	On the business pipeline agenda at the weekly check-in
2 Nov 2026	Team check-in: Dansturn's pain points (voltage problems, generator running the whole building, irregular income); data-first pitch agreed; Dansturn booked a meeting with the Apostle for 3 Nov

Related: NFE Commercial Reliable Power Microgrids · Assessing a Commercial RPM lead · Commercial RPM decision log

NFE Commercial RPM Finance Glossary

Commercial RPM Finance & Energy Glossary

Plain-English reference for NFE commercial microgrid discussions

STATUS	VERSION	DATE
Reference Draft	**0.2**	**21 Oct 2026**

How to use this glossary
The goal is not to turn every NFE discussion into finance jargon. These terms are included so engineering, product, commercial and finance discussions use the same definitions. Where NFE uses a term in a specific internal way, that is noted explicitly.

1. Core product and engineering terms

Acronym	Stands for	Plain-English meaning
RPM	Reliable Power Microgrid	NFE's product model for providing reliable electricity as a service, with NFE owning/operating the enabling infrastructure during the service term and an optional later ownership path.
EaaS	Energy as a Service	A commercial model in which the customer buys an energy service (for NFE, metered electricity and reliability) rather than buying the underlying solar, battery and inverter equipment.
C&I	Commercial and Industrial	Customer segment covering businesses and institutions such as offices, schools, hotels, clinics, supermarkets, churches and factories.
CAPEX	Capital Expenditure	Upfront investment in long-lived assets: batteries, inverters, PV modules, switchgear, cabling, controls, installation and commissioning.
OPEX	Operating Expenditure	Recurring costs of running the RPM after construction, such as monitoring, service visits, insurance, communications, billing/admin and some maintenance.

Acronym	Stands for	Plain-English meaning
O&M	Operations and Maintenance	Activities needed to keep the system safe and performing: monitoring, inspections, cleaning where applicable, repairs, warranty administration and maintenance.
EPC	Engineering, Procurement and Construction	The party/scope responsible for final engineering, purchasing equipment, constructing/ installing the system and commissioning it.
BoS	Balance of System	All supporting equipment beyond the main PV modules/batteries/inverters: mounting, cabling, protection, switchgear, combiner boxes, earthing and related hardware.
PV	Photovoltaic	Solar-electric generation technology that converts sunlight directly to electricity.
BESS	Battery Energy Storage System	The complete battery system, including cells/modules and associated controls/safety systems. Often used interchangeably with “battery storage” at project level.
LFP	Lithium Iron Phosphate	Lithium-ion battery chemistry commonly used in stationary storage because of its cycle life, thermal characteristics and cost profile.
kW	kilowatt	A unit of power: the instantaneous rate at which electricity is being produced or consumed. Inverter size and maximum facility demand are power quantities.
kWh	kilowatt-hour	A unit of energy: one kilowatt used for one hour. Customer bills and battery energy capacity are expressed in kWh.
kWp	kilowatt-peak	The rated DC output capacity of a PV array under standard test conditions.
DoD	Depth of Discharge	The percentage of a battery's nominal capacity that is used before recharging. A 90% DoD on a 120 kWh battery implies up to roughly 108 kWh discharged before other conversion losses/reserves.
RTE	Round-Trip Efficiency	The ratio of energy recovered from storage to energy put into it. If 100 kWh charges a battery and 90 kWh is later delivered, RTE is 90%.
EMS	Energy Management System	Software/control layer that decides how grid, PV, batteries and other resources operate, and provides monitoring, alarms, data and dispatch logic. For NFE this is part of the Microgrid OS.
TOU	Time of Use	A tariff structure in which electricity prices differ by time period, such as peak, shoulder and off-peak. TOU pricing can make stored solar particularly valuable during expensive evening hours.
SLA	Service Level Agreement	Contractual definition of the service NFE promises, such as availability, supported critical load, response time or outage-coverage duration.
PPA	Power Purchase Agreement	A contract under which one party sells electricity to another under agreed pricing and terms. RPM is broader than a conventional PPA because reliability, storage and operations are central to the service.
SPV	Special Purpose Vehicle	A separate legal entity created to own one project or a portfolio of projects. An RPM SPV could hold the equipment, customer contracts, debt and project cash flows separately from NFE's general corporate balance sheet.

2. Project-finance terms

Acronym / term	Stands for	Plain-English meaning
CFADS	Cash Flow Available for Debt Service	Cash generated by the project that is available to pay principal and interest after defined operating costs. In the current NFE screening model we conservatively calculate CFADS after routine O&M, NFE site overhead and lifecycle reserve contributions, but before debt service.
DSCR	Debt Service Coverage Ratio	CFADS divided by scheduled principal + interest for the same period. Example: UGX 24.5m CFADS / UGX 13.9m debt service = about 1.76x. Above 1.0x means modeled cash flow exceeds scheduled debt service; lenders normally require additional cushion.
DSRA	Debt Service Reserve Account	Cash reserve maintained to cover debt service if operating cash flow is temporarily insufficient. A 6-month DSRA holds roughly half a year of scheduled debt service.
IRR	Internal Rate of Return	The discount rate at which the net present value of an investment's projected cash flows equals zero. In plain English, it is a time-adjusted measure of the return generated by investing capital today and receiving future cash flows. Compare IRR with NFE/investor return requirements and the risks in the assumptions; it is not the same as annual profit margin.
Project IRR	Project / unlevered Internal Rate of Return	IRR calculated on the project's operating cash flows before debt financing. It answers: “Does the asset itself generate an adequate return regardless of how we finance it?”
Equity IRR	Equity Internal Rate of Return	IRR on the cash invested by NFE/equity investors after accounting for debt drawdown and debt service. Leverage can increase or decrease equity IRR depending on the cost and terms of debt relative to project returns.
NPV	Net Present Value	Today's value of future project cash flows after discounting them at a chosen required return. Positive NPV means the modeled project creates value above that required return; negative NPV means it does not.
ROI	Return on Investment	A simpler return metric comparing gain to amount invested. Unlike IRR, basic ROI does not inherently account for when cash flows occur.
WACC	Weighted Average Cost of Capital	The blended required return/cost of a project's debt and equity capital, weighted by how much of each is used. It is often used as a discount rate or hurdle reference.
LLCR	Loan Life Coverage Ratio	Present value of CFADS available during the remaining loan life divided by outstanding debt. It looks beyond a single year's DSCR to the debt coverage over the loan period.
PLCR	Project Life Coverage Ratio	Present value of CFADS over the remaining project life divided by outstanding debt. It includes cash flows after the loan matures and is therefore normally higher than LLCR.
LCOE	Levelized Cost of Energy	Lifetime cost of producing electricity divided by lifetime electricity produced, discounted over time. Useful for comparing generation technologies, but it does not by itself capture reliability value or the timing value of stored energy.
LCOS	Levelized Cost of Storage	Lifetime cost of operating storage divided by the energy delivered from storage, generally accounting for efficiency, degradation and replacement. It is a storage analogue to LCOE.

Acronym / term	Stands for	Plain-English meaning
P50 / P90	Probability-based energy cases	P50 is the energy estimate expected to be exceeded roughly 50% of the time; P90 is a more conservative estimate expected to be exceeded roughly 90% of the time. Lenders often care about conservative production cases.

3. Non-acronym terms that matter for RPM

Term	Meaning for NFE
Utility-price anchor	NFE's customer price is tied to the applicable utility tariff or a defined utility-based index, rather than an equipment lease payment.
RPM margin per kWh	The value NFE creates inside the customer's energy price after accounting for the cost of grid/other energy and RPM operating provisions. It is not automatically an extra charge above the utility tariff.
Lifecycle reserve	Cash set aside over time to fund major replacements such as batteries and inverters. It prevents the model from looking profitable only because future replacement costs were ignored.
Minimum energy commitment	A contractual floor on energy purchases that reduces lender volume risk. For Commercial RPMs, NFE uses the minimum monthly energy payment below (agreed 6 Oct 2026) rather than a take-or-pay commitment.
Minimum monthly energy payment	From commissioning, the customer pays the greater of the actual metered energy charge or 50% of the reference monthly energy charge. It replaces a lower bill and is never added on top, and service-performance credits apply if NFE fails to deliver. Agreed 6 Oct 2026.
Reference monthly energy charge	The monthly energy charge agreed after Phase 1 submetering: the measured baseline consumption, valued at the applicable Code 10.2 time-of-use tariffs. The kWh baseline is fixed in the contract; tariff changes adjust its value.
Consolidated energy bill	NFE's preferred billing arrangement: NFE manages and pays the customer's UEDCL bill and issues one bill for all the facility's electricity. The customer decides during Phase 1.
Ownership stage	The customer-facing name for the optional purchase of the system from year 5, subject to agreed terms. Used in proposals instead of "Phase 4" so it is not confused with step 4 of the delivery plan.

Term	Meaning for NFE
Code 10.2 tariff	The ERA/UEDCL commercial time-of-use tariff that Commercial RPM pricing mirrors. Q3 2026, before VAT: peak (18:00–24:00) UGX 666.5/kWh, shoulder 562.1, off-peak 429.7. ERA reviews it quarterly.
Take-or-pay	A stronger form of volume commitment under which a customer pays for a minimum contracted quantity even if it does not consume it. This can improve bankability but may conflict with the desired RPM customer experience.
Early termination payment	A payment due if a customer voluntarily exits before the contract ends, typically designed to cover outstanding debt, demobilization and a defined portion of unrecovered investment.
Tariff indexation	Rules that change the customer tariff over time based on a reference such as the applicable utility tariff, inflation or another agreed index.
Critical load	The subset of facility demand that must remain powered during an outage. Defining critical load can materially reduce battery/inverter size and project cost.
Bankability	The combination of predictable cash flows, enforceable contracts, acceptable risks, sufficient coverage, credible counterparties and technical/regulatory certainty that makes a lender willing to finance a project.

4. The four numbers to remember in an RPM financing discussion

Number	Question it answers
IRR	Is the project/equity return high enough for the risk and capital being committed?
DSCR	Does current project cash flow comfortably cover this period's debt payment?
CFADS	How much cash is actually available to service the debt after operating obligations?
CAPEX per site / per supported kW	How much capital must NFE deploy to deliver the promised reliability and what size portfolio can available capital support?

Practical rule
IRR is a return metric; DSCR is a debt-safety metric. A project can have an attractive IRR but still be difficult to finance if cash flows arrive too late or DSCR is weak in the debt years. Conversely, a project can have strong DSCR because it uses little debt while still offering a poor equity return.

See also: Glossary (NFE-wide acronyms) and NFE Commercial Reliable Power Microgrids.