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.

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