

Appendix B — Solar and Battery Resilience

Supporting document to Prospectus v2.3

Revision v1.2 | Revised September 6, 2026

Issued planning document — approved planning direction; engineering, sizing, pricing, interconnection, ownership, and regulatory validation pending

Current package reference:

CFVV_Investor_Philanthropy_Prospectus_v2.3_2026-09-04.docx

Purpose and status. This document states the approved planning basis for the Claude Firth Veteran Village solar, battery and microgrid direction. Approval applies to project objectives and planning assumptions; engineering, final equipment sizing, prices, interconnection, permitting, ownership and tax treatment remain subject to professional validation. Appendix B is not a construction specification, final engineered design, final equipment selection, contractor quotation, utility interconnection approval, tax-credit or incentive determination, or legal, tax, accounting or ownership conclusion.

Accepted decision	Planning basis
Complete initial Village	30 homes and the full shared campus from the outset.
Leading solar comparison	500 kW DC; not final sizing or a ceiling. Consider 750 kW if justified by Village needs.
Resilience	Solar and batteries primary; propane backup for exceptional shortfalls.
Commercial direction	Compare commercial cash buyback and wholesale settlement alongside AEP screening.
Financial allowance	\$3,000,000 provisional; no speculative incentives or export-income offsets.

A. Accepted project requirements

Serve 30 highly insulated, 400-square-foot homes, one resident per home, with efficient mini-split heating/cooling; the Command Center/common gathering space; kitchen/Mess Hall; laundry; workshops and enterprises; refrigeration/freezers; well and water systems; wastewater reclamation; greenhouse/agriculture; communications, security, offices and site lighting. The v1.7 workbook identifies an approximately 10,000-square-foot Command Center, laundry inside it, eight commercial washers and four dryers. Equipment loads remain unverified. [1]

Baseline outage service preserves comfortable occupancy, heating/cooling, hot water and ordinary household use in every home; the gathering space; resident/staff meals; critical water, wastewater, refrigeration, communications, security and agricultural circuits. Investigate emergency meals for approximately 20 additional people daily; meals per person and schedule remain unspecified.

Laundry, major events and discretionary heavy loads may be deferred. Necessary income-producing work should remain possible through scheduling or properly integrated supplemental power. Temporary hot-water restrictions are a severe-shortfall contingency; the illustrative “every 48 hours” bathing comment is not an operating rule.

B. Current design direction

Develop a standalone-capable, grid-connected Village microgrid. Evaluate annual energy balance, actual hourly solar/battery self-supply, and whole-utility-bill performance separately. Annual generation equal to consumption does not establish continuous off-grid capability or a zero bill. Utility credits provide financial value, not outage energy.

Use 500 kW DC as the leading comparison; size final capacity against the full campus load and outage model. Retain 750 kW when justified by demand, recharge or resilience. The investigated 1 MW export-oriented case is an alternative, not adopted scope. Provide sensible equipment space, conduit, panel positions and controls for additions without presuming more homes.

Quantity	Preliminary screening basis; not final design
Consumption	474,500 kWh/year central; 795,700 higher-use. Facility-level derivation has not been validated.
PV power / production	500 kW DC denotes panel rating. A 1.2 DC/AC ratio gives about 417 kW AC inverter capacity. Preliminary PVWatts modeling estimated about 907 MWh/year
Battery power / energy	Preliminary range: 350–500 kW and 1.5–2 MWh nameplate. Commercial comparison used 400 kW and 2 MWh.
Hourly-model result	At 500 kW: approximately 409 / 144 MWh exports and 4 / 74 MWh imports for central / higher-use loads; not performance commitments.

Preliminary Modeling Basis and Limitations. Preliminary planning results use a local PVWatts typical-year production profile and constructed hourly loads, with 30–95% battery state of charge, 90% round-trip efficiency, solar-only charging and no battery exports. Actual load and production profiles, auxiliary consumption, outage conditions, equipment degradation and end-of-life effects require professional validation. [4]

Rheem Performance RETEX-27 is the residential hot-water reference, approximately 27 kW at 240 V: 810 kW connected across 30 units, not simultaneous demand. Test winter inlet temperature, flow, fixture coincidence and smaller equivalent-comfort units. Kitchen/laundry heating is separate; compare electric tankless with gas storage without assuming gas service or simple fuel conversion. Tesla-centered and equivalent cost-optimized commercial proposals remain comparison directions; SolarEdge and Generac are candidates, not selections.

C. Battery storage and backup

Routine nighttime battery use and daytime recharge while serving Village loads are accepted. Establish a normal reserve and higher weather-alert reserve; consider partial charge at outage onset, cycling, degradation, temperature, warranties and recovery after successive poor-production days.

Evaluate ordinary overnight operation; a four-day sunny-winter outage; a four-day poor-solar outage; and a longer outage with progressive load management and propane support. Four days is an agreed scenario based on Founder experience, not guaranteed autonomy or a maximum outage. Final autonomy and reserve thresholds remain unresolved.

Required functions include safe isolation/islanding, grid-forming operation, black start, motor starting, load shedding, controlled restart and safe reconnection. Investigate deliberately activated central

propane generation that can serve loads and recharge batteries; shop generators may assist. Fuel capacity, cold-weather output, refueling, outdoor siting and isolated connections require engineering. Exclude biogas from dependable baseline supply; coordinate Appendix A later.

D. Grid connection and electricity sales

Self-supply/resilience is the adopted purpose. Surplus sales are subject to an acceptable contract and interconnection. A separate commercial generation enterprise has not been adopted. Preserve one utility connection/meter as the preferred basis, with internal submeters; additional settlement metering must be explained if required.

AEP Texas is the planned transmission and distribution utility. The household example identifies AEP Texas North, but does not establish the Village parcel's service configuration or capacity. Neither the household tariff nor its solar approval establishes commercial eligibility. No parcel-specific hosting capacity or project approval has been obtained. [2–3]

Commercial route. Seek a negotiated commercial supply/buyback agreement with cash payment or fully usable credits and satisfactory cash-out terms. Compare price floors, renewal/change rights, expiry, fees, delivery/demand charges, battery treatment and REC ownership. Chariot documents a commercial offering, but public credit language is not a verified cash offer. Reliant's cited residential plan below 50 kW is unsuitable; a separate commercial proposal is required. [6–7]

Wholesale route. Evaluate Resource Entity/SODG registration and QSE settlement representation alongside the commercial proposal. ERCOT's cited rules provide an elective SODG route at or below 1 MW and registration requirements above that threshold; new SODGs settle nodally. Registration does not guarantee profitable prices or grid access. Combined PV/battery capability, metering, fees and regulatory rating treatment need confirmation. [5]

AEP's February 2026 technical requirements address export controls, protection and telemetry. An illustrative 250 kW export cap reduced modeled 500 kW revenue only modestly; it could be useful if it avoids upgrades, but is not approved. Export limitation does not automatically alter nameplate-based rule thresholds. The cited August 2026 tariff is a reference requiring parcel/service applicability confirmation. [2–3]

The 2¢/4¢/6¢ export prices are sensitivities, not offers. Expansion above 500 kW needed roughly 9¢/kWh before incentives, major upgrades and added representation fees under the stated \$1,500/kW capital, \$30/kW-year operating, 25-year, 7% real-discount and 0.5% degradation assumptions. Gross receipts are not profit. Project-specific purchase, QSE and construction quotations remain required.

E. Financial treatment and scope

The Founder-approved allowance is \$3,000,000, recorded in the controlling v1.7 workbook at Assumptions C59. It is a planning allowance, not a quotation, verified construction cost, verified shortfall or guarantee of complete coverage. No financial totals have been independently replaced and no incentives or sales deducted. [1]

Intended scope: PV for operation/recharge, batteries, inverters, controls, islanding, protection/switchgear, emergency propane generation/integration, system engineering, installation, commissioning and applicable interconnection. Base Village electrical infrastructure is separate. Distribution,

transformers, building electrical, fuel works, grading/trenching, general soft costs and utility-upgrade boundaries remain unresolved; no overlap deduction is established.

Microgrid contingency is intended within the \$3 million but remains unitemized. There is no separately established project capital contingency or capital escalation. The workbook's solar Low/High values are explicitly historical comparisons, not bounds around the revised allowance. Its retained operating-energy assumptions and 10-resident selection differ from the full-capacity solar screen; reconcile through engineering and Finance before claiming operating savings. [1]

F. Ownership, incentives and responsibilities

Preserve the organizational planning distinction: the Veteran Village Movement Organizing Association is the temporary Texas organizing association; the Veteran Village Movement, Inc. is the intended permanent nonprofit parent and likely 501(c)(3) applicant; Claude Firth Veteran Village is initially contemplated as its program, with a possible later controlled affiliate. These descriptions are planning context, not proof of formation, IRS recognition or ownership approval. No separate energy company has been established by this planning decision.

Qualified legal review must resolve asset ownership, contracts, PGC/QF obligations, liability and charitable and tax implications. Any budget or operating-model change must follow the controlling financial revision process. IRS material identifies conditional elective pay, registration, domestic-content and prohibited-foreign-entity requirements. Solar timing rules may require service by December 31, 2027 when qualifying construction begins after July 4, 2026; storage treatment differs. Recheck at commitment; no eligibility or benefit is assumed. [8–10]

Assign an accountable owner/operator and qualified maintenance providers. Define monitoring/submetering, reserve controls, alarm response, outage procedures, fuel checks, protection tests, utility reporting and settlement reconciliation. Budget maintenance, communications, insurance, battery degradation/augmentation, inverter replacement, generator service and eventual retirement. No service contract, warranty acceptance, Far West Texas response commitment or complete replacement schedule has been verified.

G. Remaining decisions and professional validation

Decisions Remaining Before Procurement or Implementation. After professional analysis and comparable proposals, select the final service/cost tradeoff, equipment and commercial contract; decide whether any export-led expansion merits investment; and set detailed emergency meal service and contingency restrictions with the operating team. No additional Founder decision blocks use of this planning-basis document. The four outage scenarios and comfort-first direction are accepted planning requirements.

Engineering or load validation. Reconcile all facility loads with the financial model; verify envelope/HVAC, water heating coincidence, pumps, wastewater, refrigeration, greenhouse and shop motors. Produce seasonal interval profiles and end-of-life outage/recharge tests. Set battery reserves, generator size/fuel autonomy and acceptance criteria. Confirm land, access, drainage and fire separation with qualified site-planning professionals.

Utility/interconnection confirmation. Identify the parcel, proposed connection and service voltage/phase; submit a complete one-line when authorized. Screen full and limited export, aggregate equipment ratings, studies/upgrades, metering, telemetry, tariff applicability, generator restrictions and safe island/reconnection arrangements. Parcel-specific utility review and application remain required.

Contractor or vendor pricing. Obtain comparable installed proposals with explicit exclusions, contingency, schedules, warranties, service coverage and replacement costs. Obtain commercial and QSE offers with all fees, negative-price/curtailment terms, cash-out rules and REC treatment. Do not carry residential advertising into commercial forecasts.

Legal, tax or insurance review. Qualified advisers must confirm ownership and entity authority, contracts, registration, incentive deadlines and procurement eligibility, insurance, battery/fire requirements and operating responsibility.

Evidence status. Government and utility publications establish general requirements; commercial pages establish advertised capabilities only; calculations are preliminary estimates. A project-specific stamped design, permit, utility study, contractor quotation and applicable legal, tax and insurance opinions remain required.

References and Evidence Basis

The following references support the financial, technical, utility, commercial and regulatory statements in this appendix. General requirements and time-sensitive offers must be confirmed before commitment. Numbered citations link the narrative to this reference list; sources do not constitute project approval, procurement selection or professional advice.

1. Controlling v1.7 financial workbook — Veteran Village

Controlling financial authority for the \$3 million provisional allowance, full-campus scope, eight washers and four dryers, historical comparison caveat and unresolved scope interfaces. The workbook remains unchanged and controls all stated financial figures.

Controlling file: Veteran_Village_Monthly_Cost_Production_Fixed_v1.7_Solar_Microgrid_Update.xlsx

2. DER Technical Interconnection and Interoperability Requirements — AEP

Revision 2.0, effective February 1, 2026. Utility technical requirements for certified output limits, protection, communications and connection. Not a parcel-specific capacity determination.

https://docs.aep.com/docs/requiredpostings/DER_TIIR_V2_0-2025_12.pdf

3. Tariff for Electric Delivery Service — AEP Texas

Effective August 28, 2026. Utility tariff reference for study fees and delivery requirements; actual division, service class and applicability must be confirmed. It provides no quoted Village upgrade cost.

https://www.aeptexas.com/lib/docs/ratesandtariffs/Texas/AEP_TEXAS_TARIFF_Eff_August_28_2026.pdf

4. PVWatts V8 API / NSRDB typical-year data — National laboratory

Preliminary modeling input dated September 2, 2026: near 30.588° N, 103.895° W; south-facing, 30° tilt, fixed open rack, 14% system-loss input and 1.2 DC/AC ratio. Estimated production was approximately 1,813 kWh AC per kW DC annually. The result uses synthetic campus loads and is not measured Village performance.

<https://developer.nlr.gov/docs/solar/pvwatts/v8/>

5. Distributed Generation — ERCOT

Official registration and settlement guidance for SODG, QSE and metering pathways, nodal settlement, size distinctions and the stated \$2,300 registration fee. Fees are not total project costs; classification of the combined equipment remains subject to confirmation.

<https://www.ercot.com/services/rq/re/dgresource/>

References and Evidence Basis (continued)

6. Commercial Solar Buyback / Rate History — Chariot Energy

Commercial-party materials, including rate examples through March 2026. Commercial buyback is advertised using credit language. Historical West-zone customer rates are not a current Village cash offer or its nodal capture price.

<https://chariotenergy.com/solar-buyback-business/>
<https://chariotenergy.com/sbb-rate-history/>

7. Provider and representation references — Reliant, ERCOT and Priority Power

Reliant residential eligibility excludes the modeled scale; ERCOT lists QSE candidates; Priority Power advertises asset-management services. Minimum sizes, fees and commercial acceptance remain subject to confirmation.

<https://www.reliant.com/en/residential/electricity/renewable-energy/solar/solarmatch>
<https://www.ercot.com/services/programs/qse/index>
<https://prioritypower.com/solution/energy-asset-management/>

8. Rule 25.109 — Public Utility Commission of Texas; Qualifying Facilities FAQ — FERC

Texas rule effective April 26, 2023, and federal government registration guidance. PGC/self-generator and QF treatment require counsel's application to the final ownership and equipment configuration.

<https://www.puc.texas.gov/agency/rulesnlaws/subrules/electric/25.109/25.109.pdf>
<https://www.ferc.gov/about/what-ferc/frequently-asked-questions-faqs/qualifying-facilities-qf-faq>

9. Notice 2025-42 — Internal Revenue Service

Internal Revenue Bulletin 2025-36. Authoritative solar-credit timing guidance; it does not establish qualifying construction, service date or Village eligibility.

https://www.irs.gov/irb/2025-36_IRB

10. Elective pay, domestic content and Form 3468 instructions — Internal Revenue Service

Government incentive requirements, exceptions and prohibited-foreign-entity restrictions. Legal and tax review is required; no incentive has been deducted from the planning allowance.

<https://www.irs.gov/credits-deductions/elective-pay-and-transferability>
<https://www.irs.gov/credits-deductions/domestic-content-bonus-credit>
<https://www.irs.gov/instructions/i3468>

Manufacturer evidence limitation. Rheem RETEX-27 is the residential hot-water reference. Tesla, SolarEdge and Generac remain comparison candidates. No final manufacturer submittal, equipment schedule, accepted warranty or supplier commitment is incorporated in this planning-basis document.

Planning Status and Next Steps

This Appendix B states the approved full-Village resilience objectives, 500 kW DC comparison direction, conditional larger-capacity consideration, battery/propane concepts, two surplus-sales routes and \$3 million provisional allowance. It qualifies all preliminary sizing, hourly performance, outage duration, costs, export value, utility approval and incentive treatment. The solar, battery and microgrid system remains subject to final load analysis, engineering review, permitting and utility review, competitive quotations, final equipment selection, and professional legal, tax, accounting and ownership review where applicable. Professional validation and later procurement remain separate steps.

Document revision log

Revision	Date	Status / approval	Summary of change	Principal controlling sources
v1.0	2026-09-03	Issued planning document - approved planning direction; engineering, sizing, pricing, interconnection, ownership, and regulatory validation pending	Initial controlled issue following package synchronization; approved planning direction unchanged.	Prospectus v2.2; approved solar planning handoff; v1.7 workbook
v1.1	2026-09-06	Issued reader-facing planning document — professional validation pending	Removed internal drafting/audit provenance and converted source/reference material to reader-facing form; no intended change to the approved substantive planning basis.	Appendix B v1.0 approved cleanup findings; Prospectus v2.3; v1.7 workbook; cited external references
v1.2	2026-09-06	Issued reader-facing planning document — professional validation pending	Limited document-control / Prospectus-reference synchronization; current package reference updated to CFVV Investor/Philanthropy Prospectus v2.3. No substantive planning change.	Prospectus v2.3; Appendix B v1.1; Founder authorization