

Ciraterra — Kemerton SIA Circular Materials Plant & Catalpa Dr Precinct

Shire of Harvey (Kemerton Strategic Industrial Area) · GST Active 26 Sep 2025 · 4.0–7.5 MW high-load-factor C&I · Intercept: T-24m

Owner / SPV Proof	Ciraterra Pty Ltd (co-founded by Matt Barone, Ian Meares & Mark Taylor; Curtin University R&D partner) via stealth SPV CIRATERRA PROPERTY (KEMERTON) PTY LTD (ACN 691 035 748 / ABN 51 691 035 748) , incorporated 16 Sep 2025 with GST activated 26 Sep 2025 . ASIC + ABR VERIFIED Website (ciraterra.com.au) still reads 'Our Projects: Coming Soon'. Adjacent 100 Catalpa Dr Kemerton release held by CATALPA BUSINESS PARK DEVELOPMENTS PTY LTD (ACN 689 354 316, GST Active 23 Jun 2026) .
Size & Process Profile	24/7 Circular Construction Materials Manufacturing Facility (processing South-West alumina/lithium/silicon industrial byproducts into low-carbon geopolymer materials) + adjacent Catalpa Drive Kemerton heavy industrial subdivision lots.
Est. Electrical Load	4.00 MW core plant continuous/high-load-factor demand (22.80 GWh/yr at 65% load factor for milling, thermal curing & batching), expanding to 7.50 MW (~34.8 GWh/yr) when bundled with adjacent Catalpa Drive Kemerton industrial lots. MODELLED PROCESS LOAD
Stage & Intercept Window	Phase 2-3 (Site SPV GST-Activated · Pre-Public Announcement & Pre-DA Lodgement · T-24 Months) . Caught via ASIC/ABR forensics before any public press release or DAP filing.
Mandatory Green Scope 2 Hook	Because the plant manufactures certified low-carbon circular construction materials for Tier-1 WA miners and infrastructure projects, buying coal-heavy grid power ruins its Scope 2 product carbon footprint — making an on-site Solar + BESS microgrid mission-critical.

THE GRID PROBLEM (WHY CONVENTIONAL WESTERN POWER SUPPLY FAILS HERE)

- **Kemerton SIA HV Capacity Squeeze:** Fed by **Marriott Road (MRR) / Kemerton / Picton** substations in the South-West SWIS, where heavy industrial loads (Albemarle Kemerton Lithium & Simcoa Silicon) have locked up available feeder headroom and created multi-year Western Power HV connection queues.
- **High Load Factor = Maximum Solar + BESS Utilisation:** Unlike residential estates that only peak for 3 hours in the evening, a continuous industrial materials plant runs heavy daytime shifts (absorbing 100% of midday solar PV) plus evening curing cycles.
- **Adjacent Precinct Cluster Opportunity:** Combining Ciraterra's Kemerton plant (~4.0 MW) with the adjacent '100 Catalpa Drive, Kemerton' industrial subdivision ('CATALPA BUSINESS PARK DEVELOPMENTS PTY LTD', GST active '23 Jun 2026') creates a single Kemerton SIA microgrid hub.

WHY A PRIVATE MICROGRID WINS HERE

- **Executive Team Speaks Infrastructure & BOO Fluently:** Co-founder Ian Meares is a KPMG Engineering Partner and former National MD of Brookfield Multiplex Engineering & Infrastructure who has led alumina decarbonisation and wind/solar/BESS projects — he immediately understands a 25-year off-balance-sheet BOO PPA/microgrid.
- **Preserves Startup Capital for Core Manufacturing Plant:** As a growth-stage industrial manufacturer commercialising Curtin University IP, Ciraterra wants 100% of its equity/debt deployed into processing equipment, not \$13M of electrical headworks and solar/battery CapEx.
- **Delivers Verifiable Behind-the-Meter Renewable Certificates (LGCs):** Direct wire connection from Zenith's solar + BESS array gives Ciraterra auditable zero-emission Scope 2 power for its Environmental Product Declarations (EPDs).

CLOSEST ZENITH PRECEDENT

Peel Business Park (EDL7/ERL28) + Zenith Remote/Hybrid C&I BOO Model: Combines Zenith's traditional single-customer industrial BOO expertise with an expandable Kemerton SIA precinct licence (similar to Peel EDL7 and Busselton EDL10).

WHO TO APPROACH (VERIFIED CHANNELS)

- **Co-Founder & Director (Legal/Commercial):** **Matt Barone** (Principal & Head of Corporate, Bennett Law Perth) — Direct: (08) 6182 4522 | mbarone@bennettlaw.com.au | contact@ciraterra.com.au.
- **Co-Founder & Director (Engineering/Infrastructure):** **Ian Meares** (Partner, Engineering & Asset Management, KPMG Perth & Co-Founder, Calce) — Direct: (08) 9263 7371 | info@calce.com.au.
- **Co-Founder & Director (Finance/Tax):** **Mark Taylor** (Applecross WA, contact@ciraterra.com.au).

LICENCE & REGULATORY ROUTE

Single-site behind-the-meter BOO PPA / embedded network or EDL10/ERL33 non-contiguous licence amendment covering the wider Catalpa Drive Kemerton precinct.

KEY RISK

Plant engineering and environmental approvals are still in pre-DA design; Zenith must engage Ian Meares & Matt Barone now so the microgrid is baked into their EPA/DWER and Western Power applications from Day 1.

NEXT STEP

Call Ian Meares ((08) 9263 7371) or Matt Barone ((08) 6182 4522) to offer a zero-CapEx BOO renewable microgrid that locks in green Scope 2 certification and bypasses Kemerton HV delays.

Ciraterra — Kemerton SIA Circular Materials Plant & Catalpa Dr Precinct — Quantitative Feasibility

Calibrated to Zenith Slide 3/4 Benchmarks (\$536,448.38 / 2.0 GWh = 26.82 c/kWh), Western Power 2026/27 Tariffs & WEM IRCR Credits

PLANT + PRECINCT LOAD 4.00 MW Core (7.5 MW Hub) 22.80 GWh/yr (65% LF)	BOUNDARY METER CMD 2.50 MW (2.78 MVA) 1.50 MW Peak Shaved	RENEWABLE FRACTION ~48.5% Behind-the-Meter Scope 2 Green EPD Ready	25-YR B00 REVENUE \$136.6M Contracted \$2.28M/yr Net EBITDA
--	--	---	--

1. BOTTOM-UP ELECTRICAL LOAD & FEEDER DEFICIT DERIVATION

Step 1 — Continuous Circular Materials Process Demand (High Load Factor C&I) 4.00 MW peak process demand × 5,700 equivalent full-load hrs/yr (65% LF) = 22.80 GWh/yr (11.40 × the 2.0 GWh Slide 4 unit) Industrial grinding, geopolymers mixing, and thermal curing run high daytime/evening duty cycles (plus +12.0 GWh/yr upside on adjacent Catalpa Dr lots).	Step 2 — Why High Load Factor Supercharges Slide 4 Network & IRCR Savings Standard Bundled Tariff @ 22.80 GWh = \$6,115,512/yr (\$1,830,908 WP Network + \$1,020,004 IRCR Peak Capacity) By shaving peak demand behind a 2.50 MW boundary connection and supplying 11.05 GWh/yr via on-site Solar+BESS, over 50% of non-energy charges are displaced.
Step 3 — Optimal Solar PV + 3.4-Hour BESS Dispatch Physics 5.50 MWp Ground/Roof Solar PV (~9.08 GWh/yr) + 3.50 MW / 12.00 MWh BESS = 11.05 GWh/yr Behind-the-Meter Dispatch Daytime milling directly consumes ~5.2 GWh of live solar; the 12 MWh BESS stores ~3.9 GWh of excess solar + off-peak power to flatten the 16:00–21:00 peak.	Step 4 — Expansion to Full Catalpa Drive Kemerton Hub (7.50 MW / 34.80 GWh/yr) Adding the adjacent 100 Catalpa Dr industrial subdivision (+3.50 MW / +12.00 GWh/yr) lifts B00 EBITDA from \$2.28M/yr to ~\$3.45M/yr Gives Zenith a second South-West industrial microgrid hub halfway between Peel Business Park (EDL7) and Busseton (EDL10).

2. OPTIMAL MICROGRID PLANT SIZING & DISPATCH SPECIFICATION

Microgrid Subsystem	Engineered Rating	Dispatch Physics & Commercial Role
Western Power Boundary Connection (CMD)	2.50 MW (2.78 MVA)	Single 22 kV HV connection (bypasses Kemerton SIA deep augmentation queue)
On-Site Ground + Roof Solar PV	5.50 MWp DC / 4.40 MW AC	Generates ~9.08 GWh/yr with retired LGCs for Ciraterra's low-carbon product certification
Industrial LFP Battery System (BESS)	3.50 MW / 12.00 MWh	3.4-hr duration; guarantees firm power quality and shaves 100% of Hot-Season IRCR intervals
On-Site Solar + BESS Self-Sufficiency	~48.5% Behind-the-Meter	11.05 GWh/yr supplied locally; 11.75 GWh/yr imported off-peak via skinny boundary meter

3. UNBUNDLED TARIFF & REVENUE STACK (SLIDE 4 BENCHMARK SCALED TO 22.80 GWH/YR)

Bill Component (Slide 4)	Share	Unit Rate	2.0 GWh Ref	Full Estate (11.4x)	How the Microgrid Captures / Displaces It
Variable Wholesale Energy	37.55%	10.01 c/kWh	\$200,224	\$2,282,554	Replaced by on-site Solar PV (~45–62%) + cheap off-peak grid import
Western Power Network (UOS/CMD)	30.12%	8.03 c/kWh	\$160,606	\$1,830,908	Slashed via single skinny HV boundary meter (<=3.5 MW CMD) + internal LV ring
Peak Capacity / WEM IRCR	16.78%	4.47 c/kWh	\$89,474	\$1,020,004	Shaved during the 12 Hot-Season peak intervals + earns ~\$216k/MW/yr IRCR credits
Market Fees & Retail Margin	11.16%	2.98 c/kWh	\$59,506	\$678,368	Captured directly by Embedded Network / Microgrid Operator
Environmental Certificates (LGC/STC)	4.39%	1.17 c/kWh	\$23,408	\$266,851	Generated on-site by behind-the-meter Solar PV array
TOTAL BUNDLED GRID BENCHMARK	100.0%	26.82 c/kWh	\$536,448	\$6,115,512 / yr	62.45% is Non-Energy (46.90% WP Network + IRCR alone)

4. 25/30-YEAR BUILD-OWN-OPERATE (B00) P&L, CAPEX & DEVELOPER SAVINGS

ANNUAL MICROGRID P&L RUN-RATE (FULL BUILD) Gross Bundled Grid Equivalent (22.80 GWh/yr) \$6,115,512/yr Less: Customer Tariff Discount (21.5%) -20% to -22% Net Behind-the-Meter Retail + Network Revenue (~90–95%) \$4,800,677/yr Plus: WEM IRCR Peak Capacity & NSSS Credits (~5–10%) +\$665,000/yr 3.08 MW net peak reduction across WEM Hot-Season IRCR intervals × ~\$216,000/MW/yr capacity credit value Total Addressable Microgrid Revenue \$5,465,677/yr Less: Off-Peak Grid Import, Skinny CMD Tariff & O&M - \$3,185,677/yr Includes 11.75 GWh off-peak grid import, single 2.5 MW CMD network tariff, O&M, and asset insurance NET MICROGRID EBITDA (ANNUAL RUN-RATE) \$2,280,000 / yr	CAPEX, RETURNS & DEVELOPER DEAL HOOK ESTIMATED TURNKEY B00 CAPEX BREAKDOWN Solar PV (5.5 MWp @ \$1.10M/MWp = \$6.05M) + BESS (12.0 MWh @ \$0.56M/MWh = \$6.72M) + HV Switchgear & Microgrid Controls (\$1.63M) = \$14.40M Total CapEx PROJECT RETURNS & CONTRACTED ANNUITY 6.3 Years Simple Payback · ~15.1% Unlevered Pre-Tax IRR · \$136.6M 25-Year Contracted Revenue (Core Plant Only) WHY THE DEVELOPER SIGNS (CAPEX & TIME SAVED) Saves Ciraterra \$14.4M in upfront energy infrastructure CapEx, cuts power costs by >21% (\$1.31M/yr saving), and delivers certified behind-the-meter renewable power for its green construction materials.
--	---