

— DEFENSE INVESTMENT BRIEFING. APRIL 2026. —

# Portable hydrogen power for operators.

Silent, indoor safe, mission duration fuel cell systems for defense, disaster response, and remote operations.

Series A. Beta-stage technology.

A CIMtech Green Energy company. Surrey, British Columbia.

EXECUTIVE SUMMARY

# Executive Summary

Rise Power builds portable hydrogen fuel cell power systems for operators who need silent, indoor safe, unlimited runtime. Incumbent options are diesel generators and lithium battery packs. Diesel carries acoustic, thermal, and exhaust signatures, and depends on fuel convoys. Lithium packs run out, degrade in cold weather, and cannot be swapped in the field without a recharge cycle. Rise Power replaces both with a proprietary cartridge platform. A 30 second cartridge swap extends runtime indefinitely. Beta stage hardware is in active validation. Series A proceeds fund certification, pilot deployments, and first programmatic contracts.

**<65** DBA

Acoustic signature target at 1m

**0** EMISSIONS

Zero exhaust at point of use

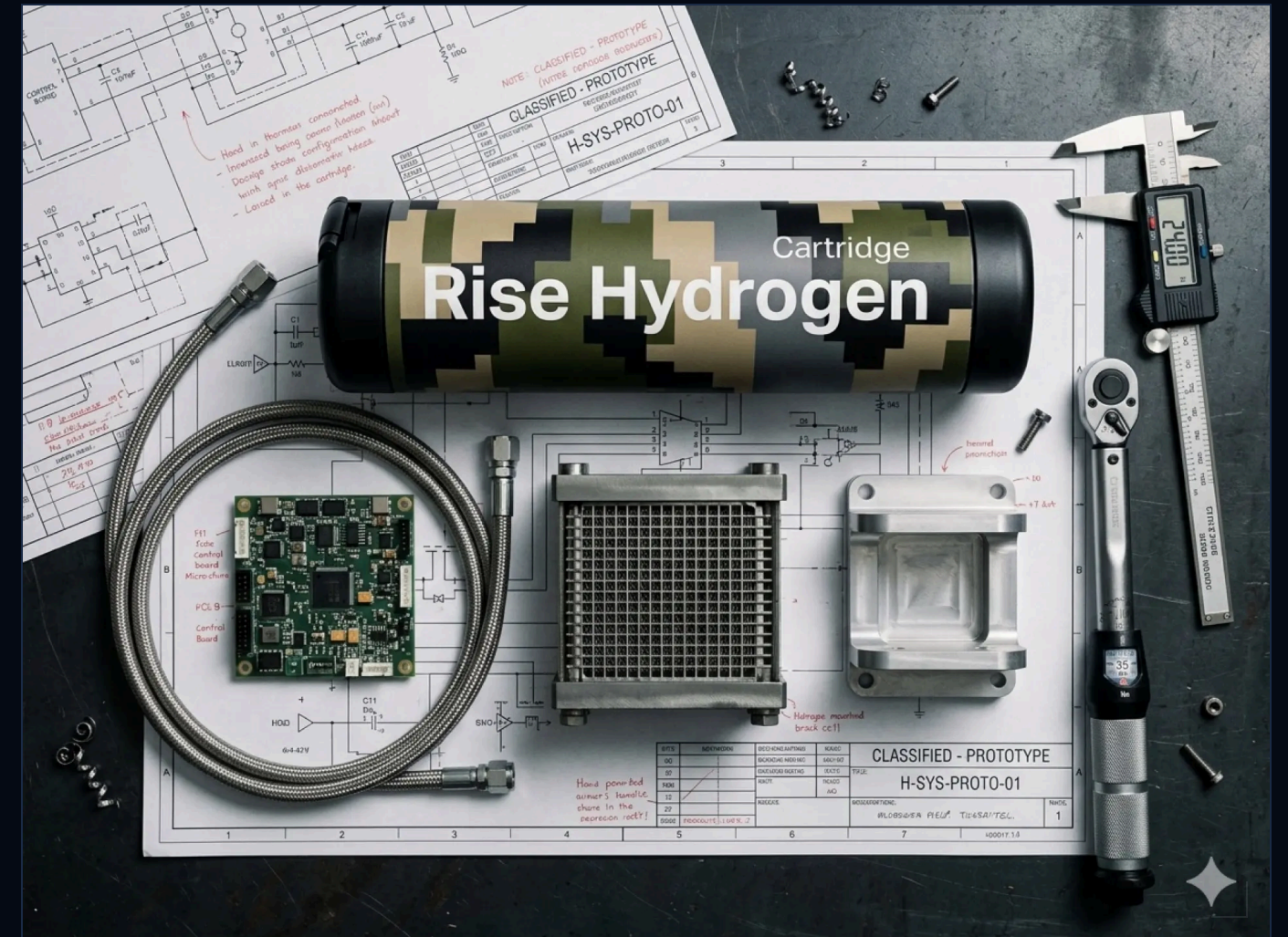
**30** SEC

Cartridge swap, unlimited runtime

**<50** LBS

Portable system weight target

Performance figures: Rise Power engineering targets, beta stage. Final certified figures will be published as MIL-STD-810 and MIL-STD-461 validation completes.



— SITUATIONAL ANALYSIS

# Capability gap in portable mission power.

Operators in defense, disaster response, and remote industrial environments still depend on diesel generators and lithium battery packs. Both have measurable failure modes against current operational requirements. The figures below compare incumbent options against Rise Power engineering targets on three metrics that drive procurement decisions.



Diesel acoustic and battery burden figures: Rise Power research file, March 2026 investment research report. Rise Power targets: src/data/content.ts.



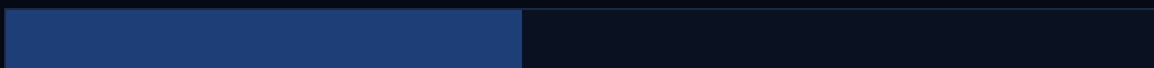
MARKET OPPORTUNITY

# Portable mission energy is a \$50B to \$100B+ category.

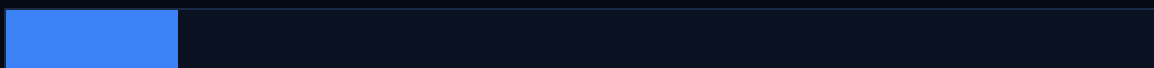
TAM TAM. Combined global market across defense energy, drone endurance, AI infrastructure backup, remote telecom, and disaster response.



SAM SAM. United States, Canada, and NATO tactical power, drone endurance modules, and indoor safe critical backup. DoD operational energy alone is \$3.5B annual.



SOM SOM. Named pilot channels multiplied by expected unit demand and gross margin per product line. 2 to 4 year execution target.



**\$50B** TO \$100B+

Global portable mission energy TAM

**\$3.5B** ANNUAL

DoD operational energy (SAM anchor)

**~19%** CAGR

Portable power market growth

TAM: Rise Power investor material, Dr. Paul Ghotra (ignoreResearch/Pitch Deck Additional Data). DoD operational energy: U.S. DoD annual operational energy budget public reporting. CAGR: Rise Power market research, March 2026.

— TECHNICAL APPROACH

# H2 cartridge platform.

The Rise Power cartridge is a cylindrical pressure vessel 6 inches in diameter and 24 inches tall, finished in digital camo, sealed with a stainless quick disconnect coupler designed for one handed field exchange. A single cartridge platform powers the entire product line. Hydrogen storage is shelf stable without stabilizers or cold weather additives. The coupler is patent pending and integrates RFID telemetry, which feeds a fleet energy data layer that compounds with deployment volume.

**6 x 24** IN  
Cylindrical pressure vessel

**<30** SEC  
Tool free swap, gloves on

**15+** YR  
Cartridge shelf life

**RFID** TELEMETRY  
Patent pending coupler

Cartridge dimensions and swap target: Rise Power engineering specifications. Patent pending architecture: filed.



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— PRODUCT FAMILY

# Four products. One cartridge backbone.

01

**SENTINEL. MAN PORTABLE TACTICAL HYDROGEN POWER. UNDER 15 LBS SYSTEM WEIGHT, SUB AMBIENT ACOUSTIC SIGNATURE, 30 SECOND CARTRIDGE SWAP FOR UNLIMITED RUNTIME.**

02

**FALCON. HYDROGEN RANGE EXTENDER FOR INDUSTRIAL INSPECTION DRONES. UNDERBELLY CRADLE, QUICK DISCONNECT COUPLER, TARGET 5X ENDURANCE VERSUS LITHIUM BASELINE.**

03

**TITAN. WHEELED 3 KW FIELD GENERATOR. OPERATING ENVELOPE TARGET MINUS 20 TO PLUS 50 DEGREES C. ZERO HEAT SIGNATURE, INDOOR SAFE.**

04

**HYDROGEN CARTRIDGE KIT. PELICAN 1610 CASE WITH FOUR CARTRIDGES IN PLUCK FOAM. STOCKPILE, TRANSPORT, DEPLOY. SINGLE ECOSYSTEM ACROSS THE ENTIRE PRODUCT LINE.**

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Product specifications: Rise Power datasheets, beta stage. See </resources/datasheets> for full engineering targets.

## — REPRESENTATIVE DEPLOYMENT

# Unlimited silent comms at a forward operating base.

## THE PROBLEM

A small forward operating base required silent backup power for command communications and an ISR feed. The diesel generator on hand was too loud for night operations and its thermal signature was visible from the surrounding ridgeline. Fuel resupply was a 36 hour round trip across contested terrain.

## DEPLOYMENT

A single Sentinel was installed beside the comms tent with a stack of pre positioned cartridges. Operators performed 30 second cartridge swaps during routine watch changes. No tools, no spillage, no radiated heat or exhaust.

## OUTCOME

- Continuous comms uptime. Runtime extends indefinitely with additional cartridges.
- Sub ambient acoustic signature at 1m. Operators slept beside the unit.
- Zero thermal signature from a forward observation post 800m away.
- Zero fuel convoys for the duration of the operation.

Representative scenario based on Rise Power engineering targets and field validation program. No real customer deployment depicted.



— PROGRAM TIMELINE

# Three phases. Each gates the next.

Phase scope is committed. Exact transition dates are a function of certification and pilot acceptance milestones, and will be confirmed during term sheet negotiation.

<p>PHASE A <span>NOW</span></p> <p><b>PHASE A. ENGINEERING VALIDATION</b></p> <ul style="list-style-type: none"><li>▪ Cartridge platform engineering complete</li><li>▪ Beta hardware in active field validation</li><li>▪ Certification workstreams initiated in parallel</li><li>▪ Investor outreach and Series A close</li></ul>	<p>PHASE B <span>NEXT</span></p> <p><b>PHASE B. CERTIFICATION AND PILOTS</b></p> <ul style="list-style-type: none"><li>▪ MIL-STD-810 environmental qualification</li><li>▪ MIL-STD-461 EMI and EMC qualification</li><li>▪ 3 to 5 pilot deployments across defense and dual use channels</li><li>▪ First SBIR or STTR contract awarded</li></ul>	<p>PHASE C <span>FUTURE</span></p> <p><b>PHASE C. PRODUCTION AND PROGRAMS</b></p> <ul style="list-style-type: none"><li>▪ Production engineering scale up at the CIMtech facility</li><li>▪ Programmatic procurement contracts</li><li>▪ Fleet energy SaaS commercial launch</li><li>▪ Allied and NATO market expansion</li></ul>
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Phase scope: Rise Power program plan. Transition dates dependent on certification and pilot acceptance milestones.

— COMPLIANCE ROADMAP

# Seven standards in active development.

Defense and infrastructure procurement gates require certified compliance. All seven workstreams are in parallel, not sequential. Each one independently unlocks a procurement channel.

<p>01</p> <p><b>TRANSPORT CANADA</b></p> <p>Hydrogen cartridge ground and air transport in Canada.</p> <p>IN PROGRESS</p>	<p>02</p> <p><b>UN 38.3</b></p> <p>International transport qualification for cartridge assemblies.</p> <p>IN PROGRESS</p>
<p>03</p> <p><b>DOT-39</b></p> <p>United States DOT non refillable pressure vessel.</p> <p>IN PROGRESS</p>	<p>04</p> <p><b>MIL-STD-810</b></p> <p>Environmental engineering: shock, vibration, temperature, dust, altitude.</p> <p>IN PROGRESS</p>
<p>05</p> <p><b>MIL-STD-461</b></p> <p>EMI and EMC qualification for collocated military electronics.</p> <p>IN PROGRESS</p>	<p>06</p> <p><b>ISO 9001</b></p> <p>Quality management system for production scaling.</p> <p>IN PROGRESS</p>
<p>07</p> <p><b>CSA AND NFPA 2</b></p> <p>Indoor hydrogen use for data centers, shelters, and command facilities.</p> <p>IN PROGRESS</p>	



Certification roadmap: src/data/content.ts capabilities.items[3].certRoadmap. Status as of April 2026.

## — RISK ASSESSMENT

# Technical, schedule, programmatic.

01

**TECHNICAL RISK****Hydrogen storage and transport**

Transport Canada, UN 38.3, and DOT-39 certifications in progress. Cartridge engineered to commercial pressure vessel standards.

**Cold weather start performance**

Target operating envelope minus 20 to plus 50 degrees C. Validation underway in coastal BC and high altitude testing.

**Cartridge swap reliability under operator stress**

Tool free quick disconnect, target swap time under 30 seconds gloves on, validated in field exercise.

02

**SCHEDULE RISK****Certification timelines vary by program**

Parallel certification workstreams, not sequential. Pilots deploy in regulator permissive use cases (industrial, disaster response) before defense procurement gates.

**Defense procurement cycles**

Dual use go to market through disaster response and remote operations generates revenue during multi year defense timelines.

**Pilot acceptance variance**

Multiple pilot channels in parallel. No single pilot is on the critical path to Series B.

03

**PROGRAMMATIC RISK****Beta stage technology with no production track record**

CIMtech Green Energy industrial parent provides Canadian advanced manufacturing pedigree and a 20 plus year operational track record.

**Single source cartridge supply**

Design for manufacturability and supply chain redundancy in production engineering scope.

**Capital intensity of hardware deployment**

Razor and blade model: hardware margins, recurring cartridge consumable revenue, and a fleet SaaS layer.

Risks identified during Rise Power Series A diligence preparation. Mitigations are active workstreams.

— COMPARATIVE ANALYSIS

# Alternatives considered.

COMPANY / CATEGORY	PORTABLE	RUNTIME	DEFENSE	CARTRIDGE MOAT	FUNDING
Rise Power	High	High	Emerging	Strong (RFID)	Series A
Diesel generator	Low	Medium	Legacy	None	Commodity
Lithium battery pack	High	Low	Limited	None	Commodity
Intelligent Energy	High	High	Strong	Medium	Private growth
SFC Energy	Medium	High	Strong	Medium	Public, scaled
Ballard / Protonex	Medium	Medium	Historical	Low to Medium	Large legacy
Plug Power	Low	Medium	Indirect	Medium	Very large

Rise occupies the ultra portable, low signature, cartridge first position for expeditionary operations.

Incumbents are enterprise scale and not optimized for one handed field swap or sub ambient signature.

Diesel and battery rows are included to show the category gap is structural, not only a vendor gap.

Vendor positioning: Rise Power competitive analysis, March 2026. Diesel and battery rows added for category context.

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— BUDGET AND RESOURCES

# Use of proceeds.

Allocation categories below are ranked by strategic priority. Final percentages and total round size will be confirmed during term sheet negotiation with the lead investor.

- 01 | Certification. MIL-STD-810 environmental, MIL-STD-461 EMI and EMC, Transport Canada, UN 38.3, DOT-39, and CSA or NFPA 2 indoor use workstreams completed in parallel.
- 02 | Pilot deployments. 3 to 5 pilot programs across defense and dual use channels. Field support, operator training, telemetry, and post pilot reports.
- 03 | Engineering team expansion. Additional fuel cell, power electronics, and ruggedized hardware engineers. Production engineering hires at the CIMtech facility.
- 04 | Production readiness. Tooling, quality systems, and supply chain engineering for first programmatic deliveries.
- 05 | Fleet energy software. Telemetry dashboard, predictive logistics, and fleet analytics platform built from RFID coupler data.
- 06 | Working capital and runway. 18 to 24 months of operating expense to reach the next de-risking milestone.

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Allocation categories: Rise Power Series A program plan, April 2026. Dollar amounts and percentages confirmed during term sheet negotiation.

— TEAM

# Leadership.

**DR. PAUL GHOTRA. FOUNDER AND CHIEF EXECUTIVE OFFICER. TWO DECADES SCALING CANADIAN ADVANCED MANUFACTURING AND CLEAN ENERGY. FOUNDER OF CIMTECH GREEN ENERGY. SURREY BUSINESS PERSON OF THE YEAR, 2023, FOR HYDROGEN LEADERSHIP.**

**VP ENGINEERING. BIO TO BE ANNOUNCED. HYDROGEN FUEL CELL SYSTEMS, POWER ELECTRONICS, AND RUGGEDIZED FIELD HARDWARE.**

**VP PROGRAMS AND BUSINESS DEVELOPMENT. BIO TO BE ANNOUNCED. DEFENSE AND INFRASTRUCTURE PROGRAMS, PARTNERSHIPS, AND CUSTOMER ENGAGEMENT.**

**CIMTECH GREEN ENERGY. INDUSTRIAL PARENT. 20 PLUS YEARS OF CANADIAN ADVANCED MANUFACTURING. PRECISION MACHINING, HYDROGEN COMPONENT MANUFACTURING, AND PRODUCTION SCALING CAPABILITY IN PLACE.**

Bios: Dr. Paul Ghotra public record (LinkedIn, drpaulghotra.com, Surrey Now Leader). CIMtech Green Energy: cimtech.green.



## — RECOMMENDATION

# The ask.

Series A. 18 to 24 month use of proceeds tied to de risking milestones.

- 01 | Lead Series A round to complete MIL-STD-810 and MIL-STD-461 certification for the core product line.
- 02 | Run 3 to 5 pilot deployments across defense and dual use channels (disaster response, remote operations).
- 03 | Secure first programmatic procurement through an SBIR or STTR award.
- 04 | Expand engineering team for production readiness at the CIMtech facility.
- 05 | Build the fleet energy SaaS layer for recurring revenue and the data moat.

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Use of proceeds: Series A program plan, April 2026.

— APPENDIX. USE CASES

# Four operating environments. One system family.

01

DEFENSE AND SECURITY. SUB AMBIENT SIGNATURE POWER FOR FORWARD OPERATIONS, COMMS, AND ISR.

02

DISASTER RESPONSE. INDOOR SAFE EMERGENCY POWER FOR SHELTERS, MEDICAL, AND COMMS WHEN THE GRID DROPS.

03

REMOTE OPERATIONS. SUSTAINED UNATTENDED POWER AT FLY IN CAMPS, MONITORING STATIONS, AND AUSTERE SITES.

04

CRITICAL BACKUP. MISSION DURATION BACKUP FOR DATA CENTERS, COMMAND FACILITIES, AND TELECOM.

Use cases: src/data/content.ts useCases.items.

— APPENDIX. COMPARABLES

# Funding precedent in the category.

- 01 ZeroAvia Series C. Approximately \$150M. Strategic and financial investors. Validates hydrogen deeptech investor appetite where the certification path is credible.
- 02 SFC Energy. Public. Approximately 144.8M EUR in 2024 sales. Strong defense and public security growth. Methanol based systems. Rise occupies the lighter, hydrogen only adjacency.
- 03 Plug Power. Major DOE loan guarantee support. Large scale stationary hydrogen ecosystem, not portable defense.
- 04 DoD linked SBIR and STTR awards continue to fund portable fuel cell innovation.
- 05 Defense tech hardware plus software companies with recurring components command premium multiples versus pure hardware.

**~\$150M**      **144.8M EUR**

ZeroAvia Series C

SFC Energy 2024 sales

ZeroAvia and SFC Energy figures: public funding announcements and annual reports. DoD SBIR and STTR awards: SBIR.gov public database.



## — APPENDIX. ANTICIPATED QUESTIONS

# Common diligence questions.

**Q01 “Hydrogen is too early for the field.”**

Mission specific pilots in constrained environments (forestry monitoring, emergency shelters, FOB comms backup) prove field readiness today, before defense procurement gates.

**Q02 “Lithium batteries will win this category.”**

Hydrogen complements batteries for endurance, rapid refuel, and cold weather use cases where lithium fails. The two technologies serve different mission profiles, not the same one.

**Q03 “Defense procurement is too slow for a startup.”**

Phased dual use go to market through disaster response and remote operations generates pilot revenue during the multi year defense procurement timeline.

**Q04 “Unit economics are unclear.”**

Razor and blade model. Hardware margins, recurring cartridge consumable revenue, and a fleet SaaS layer. Delivered energy cost per mission compares favorably to fully burdened diesel.

**Q05 “Safety compliance will block scaling.”**

Seven standards in active parallel development. Compliance roadmap is published. Beta deployments operate in regulator permissive use cases first.



— APPENDIX. INDUSTRIAL PARENT

# CIMtech Green Energy.

Rise Power is a CIMtech Green Energy company. CIMtech is a Canadian advanced manufacturing operation with a multi decade track record in precision machining, hydrogen component manufacturing, rapid prototyping, and production scaling. Production engineering, supply chain relationships, and quality systems are already in place at the parent company. Series A capital is not allocated to learning manufacturing. It is allocated to certify, pilot, and field a product the parent already has the infrastructure to build.

**20+** YEARS

CIMtech operating track record

**2023**

Surrey Business Person of the Year  
(Dr. Paul Ghotra)

**BC**

Headquartered in Surrey, British  
Columbia

CIMtech Green Energy: cimtech.green public information. Surrey Business Person of the Year: Surrey Now Leader, 2023.



— CONTACT

# Request a capability briefing.

Confidential. Not for distribution.

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