



Smart Eureka Pitch

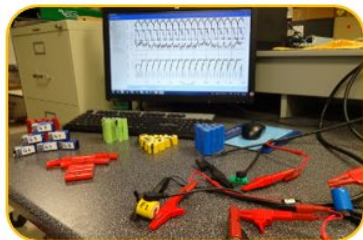
Volta Energy Inc.

ORGANISATION PROFILE



USD 134M
Capital Raised

3 Successful
Commercial
Spin-offs



36
Patents
Granted

20+
Patents
Pending

ORGANISATION PROFILE



About us

Founded in 2009, Volta Energy's origins lay in developing intelligent solutions for an increasingly electrified future. Since then Volta Energy has evolved into a technology incubator with a successful track record of developing & commercializing pathbreaking technologies. Proudly Canadian, Volta Energy is committed to developing technologies enabling sustainable transition for Industry 4.0 and empowering the workforce of tomorrow.

Mission Statement

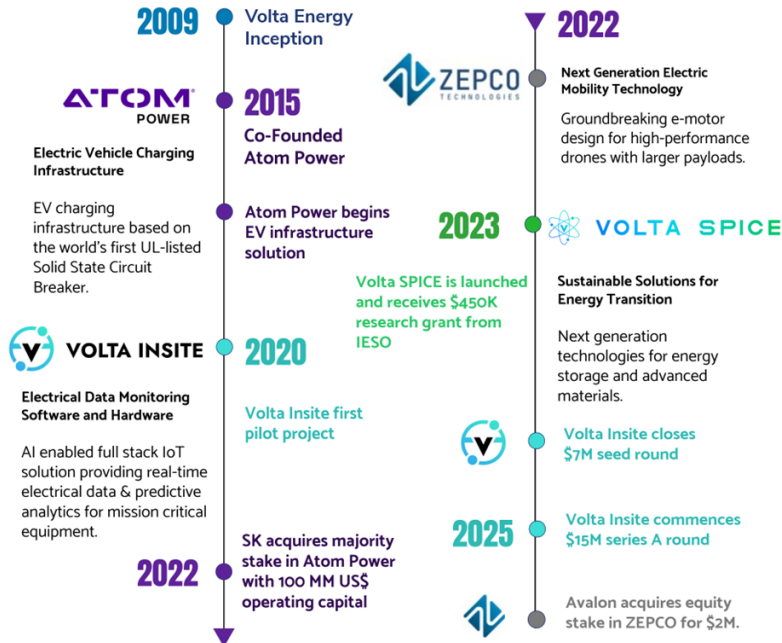
We are dedicated to pushing boundaries and solving complex challenges, bringing transformative technologies to market. Through collaboration and expertise within our diverse portfolio of companies, we create impactful solutions that shape the future of energy.



Denis Kouroussis, PhD

Founder/CEO Volta Energy
Co-Founder/CEO Volta Insite
Co-Founder/Board Member Atom Power
Co-Founder Zepco Technologies

Volta Energy Timeline



ORGANISATION PROFILE

Volta Energy - Product Suite

Remote Power Panel



HALO

DISTRIBUTION
1000A - 1600A

VOLTAGE
Up to 480V

MAX BREAKERS
26x

SHORT-CIRCUIT
100 k AIC

Solid-State
Circuit Protection



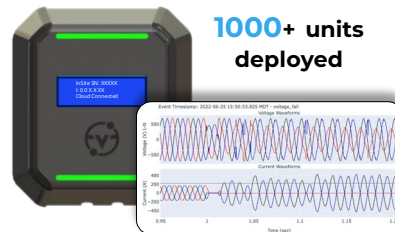
ATOM
POWER

3000+ units
deployed

World's first UL listed
solid-state circuit breaker



AI-enabled Operations
Visibility & Predictive Analytics



Enterprise Class IoT platform
for data center resilience

World's First Electrical
Intelligence Platform

Advanced Materials for
Power & Energy Solutions



VOLTA SPICE

Solid-state battery and hydrogen platforms
powered by groundbreaking chemistry

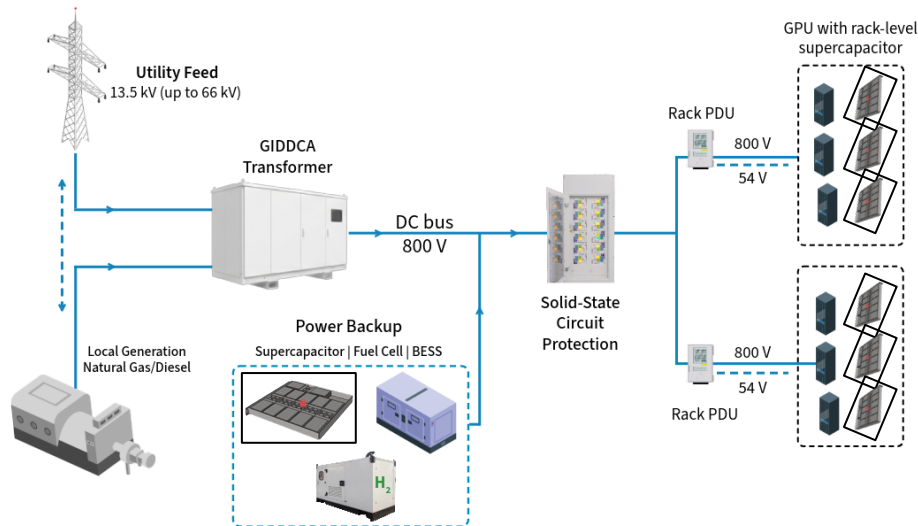
UPGID- Unified power management and control platform for grid-interactive direct-DC Data Centers

Vision:

UPGID will develop and validate a grid-interactive power control and energy management platform for 800 V Direct-DC AI data center ecosystem. UPGID operating system (OS) comprises a multi-layer control framework along with AI-enabled predictive energy management and grid side control, by utilizing local BESS, fuel-cell and PFAS-free supercapacitor technology to buffer rapid AI workload fluctuations.

Motivation:

AI-driven data centers produce rapid, high-density power fluctuations that conventional power infrastructure wasn't designed for, while bulk power grids are increasingly requiring large, controllable loads to help maintain grid compliance and stability.



Content:

- Unified multi-level control OS and AI-enabled energy and power management platform with grid-side coordination
- Novel PFAS-free supercapacitor technology for rapid response to rack- and bus-level and power fluctuations
- Integration and validation of UPGID OS for a representative 800V DC data center system model

PROPOSAL INTRODUCTION (II)

Expected outcome:

Validated UPGID OS with a system-level model for a fully integrated, grid-compliant 800V Direct-DC data center power architecture, advancing UPGID ecosystem from TRL 4 to TRL 6.

Impacts:

The Serviceable Addressable Market (SAM) for 800V DC data center electrical infrastructure is projected to reach ~US\$90B by 2030, tracking the broader shift to 800V DC architectures. The consortium's obtainable market (SOM) is set at 1–2 full UPGID ecosystem deployments in North America and 1 in Europe by 2031 capturing < 0.5% of SAM, establishing early reference installations ahead of broader scale-up.

Schedule: 24 months to develop the model, with anticipated project start date April 2027

PARTNERS

Current Consortium:

Volta Energy Inc. from Canada (Lead)
Syddansk Universitet (SDU) from Denmark
Innocell ApS from Denmark

Partner search: Open to industrial and academic partners from Smart Eureka network



All Solid-State Li-Ion Battery Platform



Next Generation All Solid-State Li-Ion Battery with PFAS free LNMO Cathode

TRL 4

Partners: NRC-ISC/IRAP, MakeSens, OVIN

STATUS:

Next-generation Li-Ion battery employing a high-voltage, PFAS free LNMO cathode and a solid-state LLZO garnet electrolyte with an aim to rapid development of technology to TRL 6 within 24 months.

Sustainability-first approach integrating naturally sourced bio-degradable materials whilst improving chemical stability, eliminating thermal runaway risks. Novel LNMO Cathode eliminates requirement of cobalt as well as minimizes nickel content.

Volta Energy's proprietary electrospinning process is being utilized for solid state electrolyte fabrication.

IP: US 63/900,225 Electrospinning and Electrospaying Apparatus; US 63/900,281 Conductive Materials, Uses Thereof and Methods for preparing the same by Pulsed Electrodeposition; US 63/906,568 Solid-State Electrolyte for Batteries, and Methods for Preparing the Same

GENESIS



Energy Efficient Synthesis of Tailored Carbon Nanotubes (CNTs) via Hydrocarbon Pyrolysis

TRL 5

Partners: MakeSens Inc., NGen, NRC-IRAP Clean Tech (In Discussions)

STATUS:

Technology scale-up in progress.

Establishing 20 kg/year production in partnership with MakeSens, to be used in their advanced Li-Ion battery anodes, with plans to ramp up production within 3 years.

Ultra-high purity MWCNT synthesis tailored for integrated circuits being researched.

Leveraging hydrogen gas by-product and biogenic methane feedstock for near zero Carbon Intensity process.

IP: US 63/738,208 Catalysts for Making Carbon Nano Tubes from Hydrocarbon Pyrolysis, Methods and Products Thereof.

CONTACT INFO

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