

## TRANSFORMING RENEWABLE ENERGY STORAGE

- **Commoditizing Energy Storage through Open Standard**
- **Datacenter backups/load leveling**
- **Grid stabilization and resilience**
- **Transportation**
- **Energy security**
- **Powered by a Broad IP Portfolio of 13 issued US patents, multiple US and International pending**



## Current large batteries are inefficient use of resource

- Large, monolithic packs lock up valuable resources
- Locked in to one use/installation, cannot be easily repurposed

## Safety concerns with lithium-ion batteries

- Risk of thermal runaway and fires
- Difficult to extinguish battery fires
- Large installations increase risk

## Scaling challenges for energy storage

- Current approaches can't meet projected demand
- Costly, large, single-purpose packs
- Supply chain vulnerabilities
- No possibility of battery reuse, expensive to recycle or repair



### Extendable Battery Framework (EBF)

An open standard for modular battery systems

### Charge Node™

Intelligent full-voltage battery modules with integrated BMS

### Charge Mesh™

Configurable modular battery power architecture

### Key features

- Full voltage modules with internal relays
- On-demand pack configuration
- Thermal runaway prevention
- Agnostic to cell type and chemistry
- Full lifecycle tracking and use control
- Easy, cost effective service and repair of pack

#### Example Module

400V, 1.5KWh

20KW peak

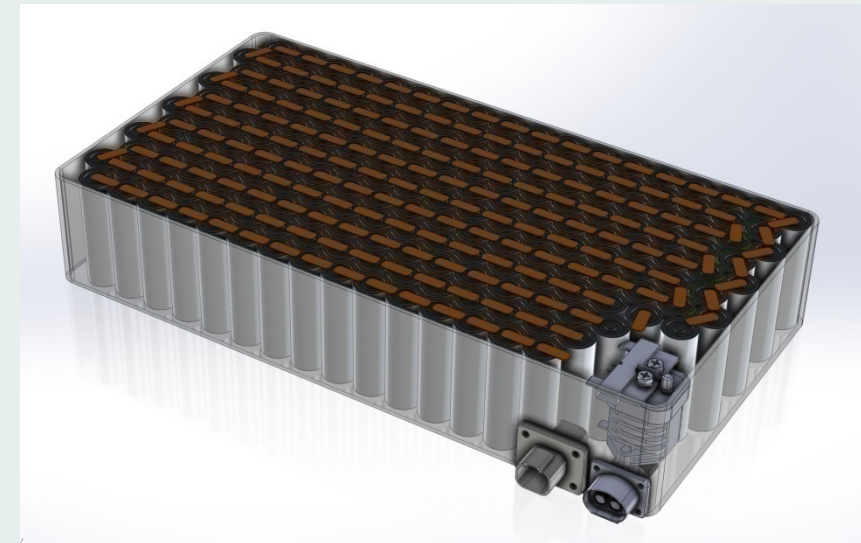
Cylindrical cells

3" x 10" x 8", 17 lbs

Motorcycle: 1-5

Car: 10-60

Truck: 50-100+



## Energy storage market growth and challenges

- Massive addressable market held back by solvable structural problems:
  - High development and deployment cost due to large, single-purpose packs for every use
  - Supply chain vulnerabilities
  - Safety concerns due to thermal runaway risk and hazards in service/repair
  - Environmental issues (resource utilization, recycling)
- Forced reliance on inefficient internal combustion generators

## Addressable markets

- Stationary energy storage applications: datacenters, solar, wind, charging stations – prevention of thermal runaway eliminates safety risk of large installations
- Automotive: cars, trucks, buses – current solutions can be replaced with new open standard solutions requiring no change to vehicles
- Other vehicles: powersports, marine vessels, aircraft – greatly reduced design cost

## ModBatt solution addresses all key barriers to commodity energy storage

## Extendable Battery Framework (EBF)

- Series-only module architecture prevents thermal runaway
- Full voltage modules are monitored and controlled independently
- On-demand pack configuration by adding/removing modules as needed
- Agnostic to cell type and chemistry, enabling rapid adoption of improvements
- Allows different module types to operate in the same system

## Charge Node™ Battery Modules

- Integrated BMS for precise monitoring and control
- Individual cell monitoring for enhanced safety
- Fully hot-swappable and interchangeable

## Charge Mesh™ Architecture

- Scalable and adaptive power system
- Enables operation with fractional battery capacity for improved efficiency
- Enables optimized use of battery resource

- **Unrivaled safety:** Thermal runaway prevention, self-isolating modules, eliminate cell failure caused fires
- **Flexibility:** Interchangeable modules across various applications, stationary and mobile
- **Efficiency:** Field-configurable power and range
- **Cost-effective:** Reduced R&D time and costs for OEMs, economies of scale
- **Future-proof:** Easily upgradeable as battery technology improves
- **Circular economy:** Facilitates multi-use, re-use, and verified recycling
- **Open Standard:** Facilitates rapid industry adoption while maintaining technological lead
- **Strong IP Portfolio:** Extensive patent protection maintains control over open standard with **13 US Patents issued**, multiple US and international patent applications pending

## MULTIPLE REVENUE STREAMS

- **Recurring transaction-based revenue from standard-based marketplace:**  
Fees generated from battery module transactions and lifecycle management
- **Recurring distributed-ledger-based commodity exchange revenue for battery transactions:**  
Secure, transparent, and efficient trading of battery modules
- **Low and medium volume manufacturing:**  
Production of modules and complete battery systems targeting niche and specialty markets (e.g., high-performance vehicles, marine, aerospace)
- **Custom design and engineering:**  
Design and configuration of complete energy storage and power systems for a wide range of applications, both mobile and stationary
- **Licensing of technology to OEMs and battery manufacturers:**  
Scale quickly through licensing of open standard designs
- **Recurring revenue from IT services and blockchain infrastructure management:**  
Value-added services (e.g., battery health monitoring, predictive maintenance, module valuation for resale based on use history and condition)

- **Prototypes and lead customers in progress**
  - Custom off-road electric vehicle (customer-funded)
  - Battery packs for Toyota Research Institute (TRI) (customer-funded)
- **Initial BMS design complete and tested, prototypes delivered to customers**
- **Initial Module and pack design complete and tested**
- **13 US Patents issued + pending, international coverage via PCT with multiple allowances**
- **Multiple PCT applications filed, some entering national phase**
- **\$300K+ revenue to date**
- **\$100K+ receivables on delivery of projects**
- **Active contract discussions with several niche manufacturers in marine and aerospace applications**

**Dennis Palatov - Founder, CTO, acting CEO**

- 40+ years of design experience in electronic and mechanical engineering, team building/leadership, startup operations and management ▪ Multiple successful vehicle designs, including race-winning electric cars ▪ 30+ US and foreign patents issued

**Larry Rinehart – Director of Advanced Engineering, Senior Technical Advisor**

- 50+ years in design engineering and management, serial entrepreneur, founder of Rinehart Motion Systems (an early leader in electrification, sold to BorgWarner 2019), EV and HEV propulsion and fast charging specialist. Expertise in power electronics, vehicle propulsion system design, functional safety, OEM vehicle component design and qualification. ▪ 10+ issued patents.

**Aric Streeter – co-Founder, VP Engineering**

- 25+ years in engineering and management, including OEM vehicle components ▪ Expertise in automotive quality systems and regulatory compliance

**David Howarth – co-Founder, VP Sales**

- 20+ year automotive industry executive in sales, marketing, and business management ▪ Former Regional President for ETAS division of the Bosch Group

**Tristan Lewis – co-Founder**

- 20+ years experience in prototype and specialty vehicle construction

- **Seeking to raise up to \$10M**
- **Company valuation: \$50M** (IP-driven, future open standard licensing and transaction revenue potential)
- **Use of funds:**
  - Commercialization of low-cost ASIC for BMS – dramatic cost reduction of existing discrete solution
  - Establishment of Safe Battery Alliance industry nonprofit
  - Development of reference designs and ISO-26262 Functional Safety compliance
  - Low volume production of commercially viable battery modules and pack controllers based on existing discrete design, cost reduction via ASIC
  - Development of blockchain support infrastructure
  - Marketing and outreach to industry stakeholders and influencers
- **Previous funding and revenue:**
  - \$145K seed funding by the team
  - \$500K external investment under SAFE
  - \$300K revenue to date
  - \$100K+ receivables on delivery of current projects

## Current Revenue Sources:

- Low and medium volume manufacturing for niche markets
- Prototype and custom battery system development
- Initial licensing and technology partnerships

## Growth Strategy:

- Expand adoption of EBF standard in multiple sectors, starting with datacenters
- Increase production capacity for niche and specialty markets
- Scale transaction-based revenue model as standard gains traction
- Develop strategic partnerships with customers and battery manufacturers
- Expand into adjacent markets (stationary, marine, aerospace, automotive)

## Key Revenue Drivers:

- Licensing fees from OEMs and battery manufacturers
- Transaction fees from battery module exchanges
- Manufacturing revenue from niche market production
- Recurring revenue from IT services and blockchain infrastructure

## Key Value Propositions

- **Innovative Solution:** Addresses critical energy storage market challenges of safety, efficiency, and scalability ▪ Enables a sustainable, circular economy for energy storage
- **Strong IP Portfolio:** 13 US patents issued, multiple pending ▪ Maintains control over open standard while fostering industry adoption
- **Multiple Revenue Streams:** Manufacturing for niche markets ▪ Licensing and partnerships ▪ Transaction-based fees from battery exchanges ▪ IT services and blockchain infrastructure management

## Our Vision

- ModBatt is poised to transform the energy storage landscape, enabling rapid adoption of technological improvements and supporting a sustainable future.

**Join Us in Transforming Energy Storage!**  
**Your investment will accelerate the transition to a safer, more efficient, and more resilient energy ecosystem.**

## List of Filed and Issued IP

1. **US11,380,942** PCT/US21/50518 **HIGH VOLTAGE BATTERY MODULE WITH SERIES CONNECTED CELLS AND INTERNAL RELAYS** Filed 02-NOV-2020 \*module with series connected cells and relays\* - **ISSUED 7/5/2022**
2. **US11,469,470** PCT/US21/53798 **BATTERY MODULE WITH SERIES CONNECTED CELLS, INTERNAL RELAYS AND INTERNAL BATTERY MANAGEMENT SYSTEM** Filed 04-JAN-2021 \*cell monitoring/conditioning circuit, PCBAs, methods\* - **ISSUED 10/11/2022**
3. **US11,563,241** **APPARATUS AND METHODS FOR REMOVABLE BATTERY MODULE WITH INTERNAL RELAY AND INTERNAL CONTROLLER** Filed 10-FEB-2021 \*authentication methods and circuits\* - **ISSUED 12/14/2022**
4. **US11,575,270** PCT/US21/55047 **BATTERY MODULE WITH SERIES CONNECTED CELLS, INTERNAL RELAYS AND INTERNAL BATTERY MANAGEMENT SYSTEM** Filed 22-FEB-2021 (CIP) \*AC coupled comms and methods\* - **ISSUED 02/07/2023**
5. **US11,699,817** PCT/US21/54434 **APPARATUS AND METHODS FOR REMOVABLE BATTERY MODULE WITH INTERNAL RELAY AND INTERNAL CONTROLLER** Filed 31-MAR-2021 \*system, pack and module controllers, blockchain\* **ISSUED 07/11/2023**
6. **US11,477,027** PCT/US21/55813 **APPARATUS AND METHODS FOR MANAGEMENT OF CONTROLLED OBJECTS** Filed 11-MAY-2021 \*multi-domain management of controlled objects, LCT/blockchain\* - **ISSUED 10/18/2022**
7. **US11,936,008** PCT/US21/60860 **ELECTRICAL POWER SYSTEM WITH REMOVABLE BATTERY MODULES** Filed 17-NOV-2021 \*dissimilar modules in parallel\* - **ISSUED 3/19/2024**
8. **US12,278,913** PCT/US22/24797 **APPARATUS AND METHODS FOR MANAGEMENT OF CONTROLLED OBJECTS** Filed 31-MAR-2022 \*linking of identifiable records\* **ISSUED 4/15/2025**
9. **US11,876,250** PCT/US22/xxx **HIGH VOLTAGE BATTERY MODULE WITH SERIES CONNECTED CELLS AND INTERNAL RELAYS** Filed 31-May-2022 \*dissimilar relays, PLC control bus, linear and pwm modes\* - **ISSUED 1/16/2024**
10. **US12,046,722** **ELECTRICAL POWER SYSTEM WITH REMOVABLE BATTERY MODULES** Filed 12-DEC-2022 \*vehicle and stationary installations having a power system, energizing a bus\* - **ISSUED 7/23/2024**
11. **US12,405,309** **LOW COST BATTERY CELL MONITORING CIRCUIT** Filed 3-JAN-2023 \*low cost ASIC\* **ISSUED 9/2/2025**
12. **US12,136,739** **LOW COST BATTERY CELL MONITORING CIRCUIT** Filed 14-DEC-2023 \*low cost ASIC methods\* **ISSUED 11/5/2024**
13. **US12,142,737** **ELECTRICAL POWER SYSTEM WITH REMOVABLE BATTERY MODULES** Filed 14-DEC-2023 **ISSUED 11/12/2024**
14. US 18/935,265 **HIGH VOLTAGE BATTERY MODULE WITH 1-PHASE AND 3-PHASE AC OUTPUT** Filed 11/1/2024