2022 Update

NAATBatt INTERNATIONAL

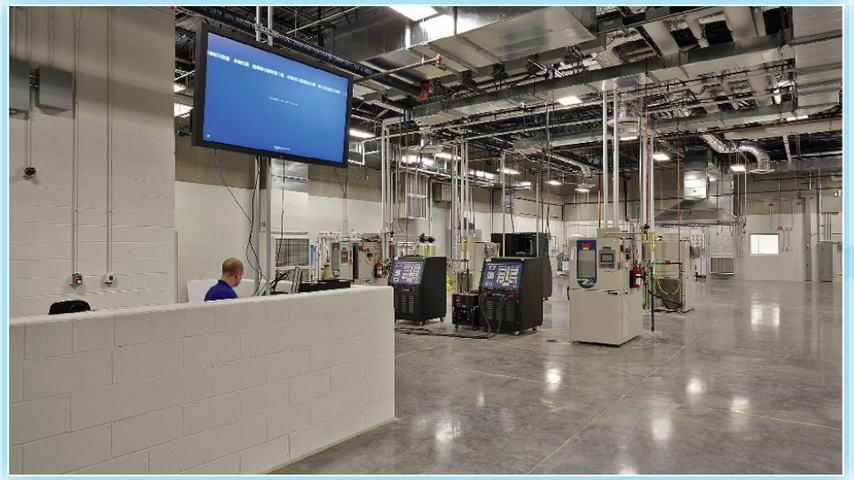
"Leading the Charge for Innovation" v1.1

Mission

Rapidly develop, test, and help commercialize next generation energy systems that are safe, reliable, and lower-cost with partners from Industry, DoD/DoE, and Academia in a unique non-profit, public-private environment.

Distinguishing Features

- Catalyze technologies by reducing long, expensive innovation-to-commercialization development cycle
- Do not hold patent rights, reducing concerns to jointly develop technology
- IP-secure, U.S. ITAR facility generating reliable data using leading techniques and equipment



Core Capabilities

- Advanced Cell Manufacturing
  - Materials processing to electrochemical testing
- Testing, Evaluation, and Certification
  - Cells, Modules, Small/Large Pack, and Containerized
  - AC/DC Microgrid and Cybersecurity
- R&D, Applied Services and Technical Advisory
- Failure Testing, Forensics, and Assessment
- Accredited Training and Short Courses

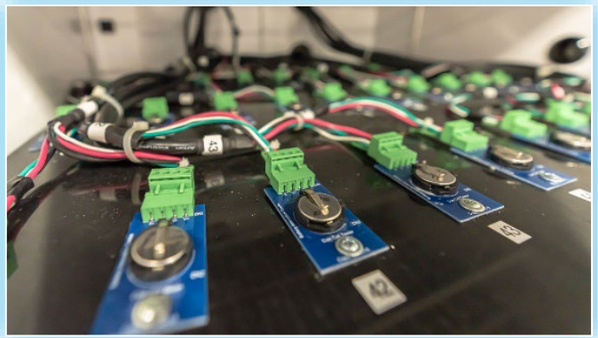
Advanced Cell Fabrication

Low Volume Cell and Pack Production

- <1% Relative Humidity/10K Class Dry Rooms
- Commercial quality cell manufacturing equipment
  - Cylindrical, Pouch, Prismatic, and Coin-cells
- Proof-of-Commercialization expertise

Material and Process R&D

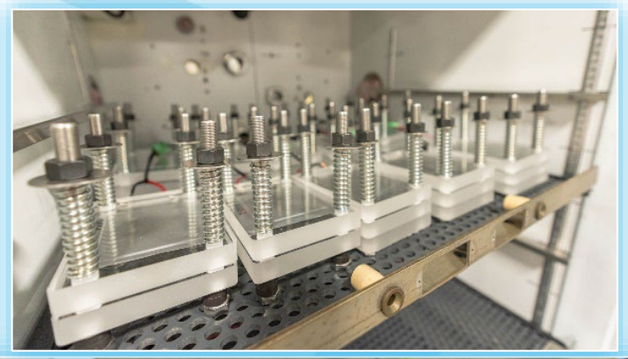
- Novel use of industry-leading materials and technologies
- Small batch mix and coat capabilities
- Direct partnerships with industry suppliers
- Factory demo center for equipment OEMs

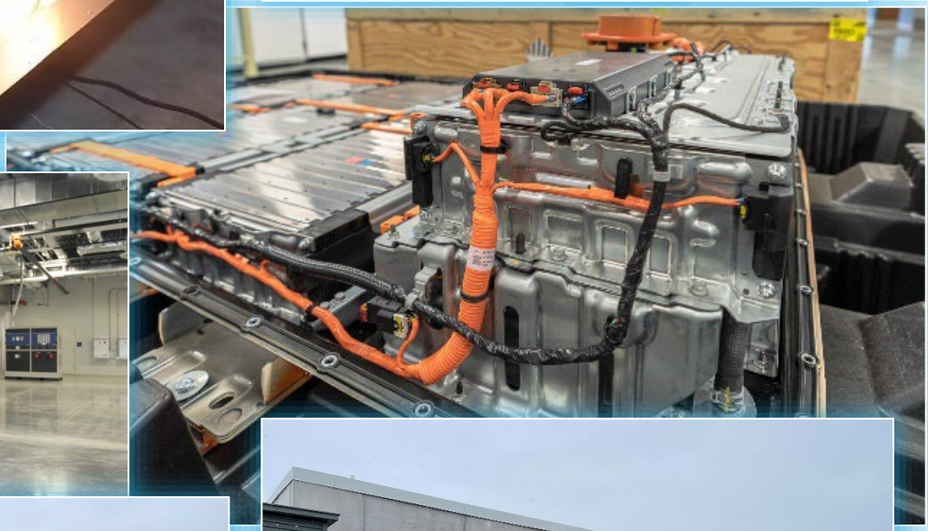


Testing, Evaluation, and Certification

Battery Testing and Validation

- From single cells through to full systems
  - Large format and outdoor testing capabilities
- Environmental, Hazards, and Safety
- Crush, Propagation, Drop, External Fire, and more
- UL, MIL, UN-DOT, SAE, IEEE standards
- Comparative and Competitive Analysis

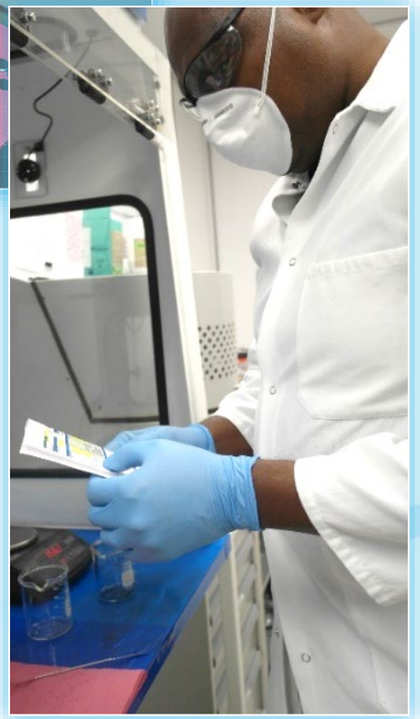


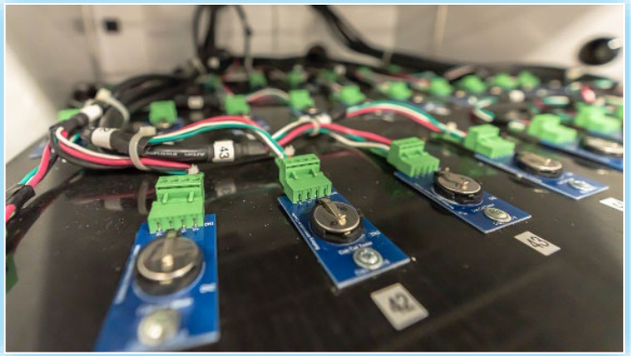


Micro-Grid and V2G Testing

- Integrated solar and wind renewables
- Plug-n-Play with various ESSs, inverters, PCSs
  - AC utility-scale grid simulators (180kW+ scalable)
  - >6MW of available power with net metering (MISO High Voltage Node) agreement
- Cybersecurity Program/Hackathons
- Open FMB and MESA
- 500Kw Vehicle to Grid
  - MISO Tied

Research and Development





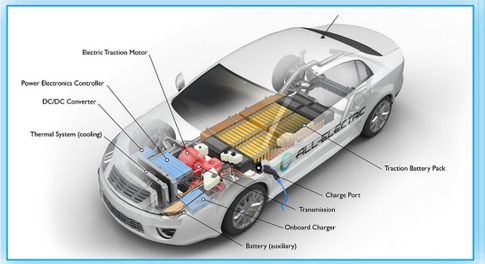
Standards and Materials Development

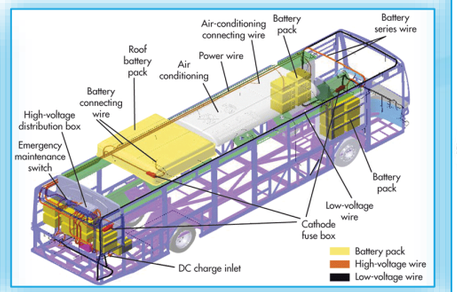
- In-Process consulting
- Internal capabilities expansion
- Next process Quality and Assurance
- Technology road mapping
- Emerging Technology (ex. Solid State, Additive, Thermals)

Novel Labs

- Slurry recipe development & mixing
- Electrode casting
- Forensics and structure analysis
- Discovery opportunities

Applied Services and Technical Advisory





Expert Assessment and Analysis

- Facilities, Processes, Safety, Auditing, and Design
- Equipment and Capabilities
- Cell, Module, Pack, and System Design
- Battery Management Systems
- Vendor management and support
- Handling and Transportation
- Battery Second Use and Remanufacturing
- EV/PHEV, Consumer/IoT, Medical, Military, and Grid
- Consumer products through to Motive and Large Format

Competitive Analysis

- Manufacturing & Test Equipment and Software
- Battery Components to System Operations
- Cell Dissection and Lab Analysis

Accredited Training and Short Courses

Battery Energy Storage Short Course (CEU)

- Industry leading experts teaching 3-4 Day Sessions
- Course Outline: Chemistry, Fabrication Development Processes, BMS, Module/Pack/System Design, Manufacturing, Validation/T&E, Cybersecurity, Second Life, Standards, and other key areas!
- Hands-On and Virtual Available

AC/DC HV Fundamentals Course (CEU Credits)

BMS Battery Management Systems Design

Energy Storage Technologies Executive Workshop

- Understanding, risk, and opportunities at leadership level

On-Site and Remote Training

- Customized per client interest
- Individual modules including hands on practical application

CEU's accredited by:

PURDUE UNIVERSITY

VINCENNES UNIVERSITY
BUSINESS & INDUSTRY TRAINING

Strategic Alliances and Incubators

UL BEST

- **B**attery and **E**nergy **S**torage **T**echnology test center - exclusive large-format US ESS test facility
- ISO 17025 accredited
- Direct collaboration with UL expertise and experience

BrightVolt

- Scale-up of Ultra-Thin Film, Flexible Batteries
- Commercialization for medical patches, industrial sensors, IoT devices, shipping labels, and smart card technologies

Ateios

- Highly customizable flexible batteries
- Scale-up for flexible electronics, smart textiles, soft robotics, IoT, medical/fitness wearables

Duke Energy

- Micro-grid simulation and grid-level control algorithm development
- Leveraging installed and new renewable generation
- Open FMB (Field Message Bus) Accredited Test Lab

NSWC Crane

- CITE agreement allows direct access to the Navy's world-class EHS test facilities
- Crush, shock, drop, vibe, rapid disassembly, intrusion, EMI, among others

Emerging Technology

First Responders and Methodologies

- Cell though large format system hands-on
- Extensive fire mitigation, response, and materials
- Data sets for modeling and design
- Multi-chemistry and all formats
- Led by active Fire and First responder personnel and Battery Experts

2nd Life (Remanufacture, Repurpose, Recycle)

- Advanced grading
- Product analysis
- Pilot incubation
- Direct capability establishment
- Compatibility cell builds

Expanded large format and capacity

- Up through 60Ah, multi-layer and large format cylindrical
- Incubator locations scale-ups (plug and play)
- Additional automatic cell production capability

Thank You!

Find Out More @ www.BICIndiana.com

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