# CUSTOM BATTERY PACKS, CHARGERS, AND BATTERY MONITORING SYSTEMS (BMS) 



## COMPANY BACKGROUND

Nova Battery Systems ("NBS") designs and manufactures safe, reliable Custom Battery Packs and Battery Charging solutions that meet customers' power system specifications.

The company's team of expert engineers has decades of battery chemistry experience with Li-Ion, Lithium Iron Phosphate (LiFePO4) and Lithium Phosphate, many lithium primary chemistries (e.g., Li-Manganese Dioxide), nickel-based rechargeable chemistries such as nickel metal hydride (NiMH), sealed lead acid (for mobility devices such as electric scooters and wheelchairs, and non-rechargeable alkaline cell chemistries. NBS's rechargeable and non-rechargeable battery packs are suitable for most medical, environmental monitoring \& detection, industrial, test \& measurement, robotics, asset tracking and GPS, military and harsh environment, UPS critical power, and stationary power applications.
NBS has extensive in-house prototyping capabilities including sheet metal fabrication, 3-D CAD package design and finite element analysis (FEA) and thermal simulation verification (CFD), 3-D printing, and ultrasonic sealing for plastics. Mechanical packaging is available in shrink wrap, hard plastics, or various metal alloys. In-house designed battery monitoring or monitoring/charging electronics provide telemetry over many communication interfaces including I2C, RS-232 serial, CAN bus, Bluetooth and WiFi.

NBS is a division of Technology Dynamics Inc., a multi-divisional company specializing in power conversion and power solutions for industrial and military applications. Founded in 1976, Technology Dynamics Inc. serves the US Military's largest prime defense contractors, as well as many heavy industry and transportation authorities. The organization chart below represents TDI's operating divisions and subsidiaries.
NBS is located in TDI's main campus in Bergenfield, NJ. As an independent business unit, NBS has its own engineering and manufacturing resources and draws upon TDI's resources when needed.

## CONTACT

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## MARKETS SERVED

As a full-line manufacturer of battery packs and chargers, NBS serves many public and private sector markets including:

## Medical

- Surgical Tools
- Portable Oxygen Concentrators
- Insulin Delivery
- Infusion Pumps
- Ultrasounds


## Monitoring and Detection

- Air Sampling
- Handheld Analyzers
- Radiation Detection
-Geophysical Devices
- Oceanographic

Industrial

- Automated Guided Vehicles (AGV)
- Utility Vehicles - Off Road
- Low-Speed Electric Vehicles
-Burden Carrier / Tow Tractors
-Forklifts and Cargo Moving Vehicles
-Telecommunications
- Power Tools


## Test \& Measurement

- Intrinsically Safe Environments
- Oceanographic Surveying
- Environmental Monitoring
- Air Sampling and Gas Leaks
-Radiation Detectors


## Robotics and Drones

- Unmanned vehicles
- Drones
- Rescue
- Industrial Automation
- Security


## Asset Tracking \& GPS Satellite

- Asset Tracking Devices
- Global Positioning
- Satellite
-RFID


## Military

- UAV and Drones
- Night Vision Cameras and Goggles
- Handheld Communication
- Stationary, Land-Based Systems
- Ground Mobile Vehicles, Surface Ships and Submarine
- Aircrafts
- Shipboard
- Onboard Server Backup
- Onboard Network Backup
- Ground Mobile
- Energy Storage Modular Solutions


## Stationary Ground Power

- Electrical Generation Power Plants \& Substations
- Oil and Petrochemical Processing Plants Battery Pack Testing and Quality Systems NBS is partnered with several third-party testing labs to meet whatever certification and/or qualification tests are necessary for your product design, including:
- UL, CE, CB, IEC, PSE, RoHS, REACH, ESDA
- FCC, UN38.3

In addition, Nova Battery Systems is certified to:
$\sqrt{ }$ ISO9001:2015 Certified
$\sqrt{ }$ ISO13485:2016 Certified


Leader in Rechargeable Energy Systems

## QUALITY MANAGEMENT SYSTEMS AND CERTIFICATIONS

NBS is an ISO9001:2015 and ISO13485:2016 Certified company dedicated to providing safe, high quality products.

Nova Battery System's Quality Policy is to maximize customer satisfaction and safety, while assessing and mitigating risk through the following:

1. Meet or exceed customer satisfaction through on-time delivery of defect free products and services.
2. Continue statutory/regulatory compliance.
3. Develop a reliable supplier base, capable of defect free products and service delivery to the company.
4. Maintain a safe work environment with a goal of zero accidents or reportable incidents.

Nova Battery Systems resides within a 50,000 square foot factory complex in Bergenfield, NJ USA, approximately 20 minutes from New York City. This plant includes all necessary facilities for the complete design, manufacturing, and testing of our entire product line. These facilities include:

- Custom battery pack and charger engineering center
- PCB layout \& assembly
- Box build turnkey assembly
-3D printing
- Customized sheet metal fabrication
- Ultrasonic welding
- Fully equipped machine shop
- Plastics prototyping
- Electrical testing
- Environmental testing

Having all facets of the design and production of our products under one roof ensures total quality, reduced deliveries, and gives Nova Battery Systems the ability to rapidly customize products per unique customer requirements.


