Minutes of the NDIA Power Sources Committee

Meeting Dates: 21 June 2017
Location: Wright Patterson AFB
TEC^EDGE INNOVATION & COLLABORATION CENTER
5000 Springfield Street
Suite 100
Dayton, Ohio 45431

Attachments:
A. Attendees
B. Meeting Agenda
C. Off-Gas Monitoring for Lithium Ion Battery Health and Safety - Nexceris
D. Advanced CVX Cells for Military Applications – Engineered Power
E. Alane - Aluminum Hydride for Fuel Cell Power - Ardica
F. Electroplated Materials and Functional Substrates for High Performance Lithium Ion Batteries – Xerion Advanced Batteries Corp.
G. UAS Hybrid Power & Propulsion - Air Force Research Laboratory

Attendants: See attachment A

Agenda: The agenda for this meeting is provided as Attachment B.

NDIA Power Sources Committee meeting
Off-Gas Monitoring for Lithium Ion Battery Health and Safety (Steve Cummings & Scott Swartz, Nexceris LLC.)
1. An overview of a sensing system to detect Li-Ion malfunctions was provided.
2. These systems can be mounted on board the battery or external. The closer the system is to a malfunctioning cell the greater the opportunity to prevent thermal runaway.
3. A copy of the presentation is provided as Attachment C.

Advanced CVX Cells for Military Applications (Vincent Visco, Engineered Power)
1. Engineered Power is a manufacturer of cylindrical non-rechargeable cells from 1/2AAA to DDD and E
2. They specialize in Li-Thionyl, Li-CFx and Li-CFx/MNO2.
3. The principle customer for their produces are oil drilling companies.
4. The products could be of benefit to military applications.
5. A copy of the presentation is provided as Attachment D.

Alane – Aluminum Hydride for Fuel Cell Power (Dan Braithwaite, Ardica)
1. Alane (aluminum hydride), produced through a patented Ardica process to produce hydrogen for light weight fuel cell applications.
2. Both Army and Navy applications are being developed.
3. A copy of the Ardica presentation is provided as attachment E.

**Electroplated Materials and Functional Substrates for High Performance Lithium Ion Batteries (Justin Lenoff, Xerion Advanced Battery Corp.)**
1. Xerion is developing a manufacturing process for electro-plating lithium ion electrodes.
2. The process is simple, lends itself to mass production and produces better electrodes.
3. A copy of the Xerion presentation is provided as attachment F.

**UAS Hybrid Power & Propulsion (Michael Rottmayer, PhD - Air Force Research Lab)**
1. A brief overview of Wright Patterson AFB along with how Power & Control Technologies fit in was provided.
2. A more detailed overview of the efforts to support Small Unmanned Aircraft Systems (SUAS) and Unmanned Aircraft Systems (UAS) was also briefed.
3. A copy of the Air Force presentation is provided as attachment G.

Our next meeting is tentatively set for November 2, 2017 at ACI in Philadelphia.