



**Suppliers Partnership for the Environment (SP)
Responsible Battery Work Group Meeting
January 30, 2018**

DRAFT MEETING MINUTES

Kellen Mahoney, SP, called the Responsible Battery work group meeting to order at 11:00am CST. He reviewed SP's antitrust guidelines and recommended that everyone indicate in their notes of the meeting that the guidelines were reviewed and that they would be complied with.

Kellen introduced SP's partners from the Responsible Battery Coalition (RBC), and Pat Hayes, RBC, provided an overview of the mission and objectives of the RBC. Participants then introduced themselves and shared information on their interests regarding battery management.

Alessandra Carreon, Ford and SP's Responsible Battery work group co-chair, provided an overview of the objective of the planned SP/RBC landscape assessment project. She noted that SP and RBC will lead a collaborative project to establish a baseline assessment of the current landscape of end-of-life (EOL) management for all types of lithium-ion batteries (LIB) used in hybrid and electric vehicles, and identify opportunities for the North American automotive industry to advance responsible management of such technologies.

Adam Muellerweiss, Johnson Controls and SP's Responsible Battery work group co-chair, then provided an overview of key issues the project will consider, including:

- Current lithium-ion battery EOL programs / practices used by companies in automotive and related industries, including any notable successes and best practices that could be leveraged (e.g. ELVS, Call2Recycle, second life, etc.)
- Existing infrastructure and EOL capabilities for lithium-ion batteries applicable to North America (e.g. collection, logistics, reuse, recycling, remanufacturing)
- Current challenges and opportunities related to EOL management of lithium-ion batteries (e.g. cost, technology, risk, etc.)
- Current regulations and emerging trends impacting EOL management of lithium-ion batteries (relevant domestic/international regulations, regulatory barriers, emerging trends that may shape future regulatory landscape)
- Future trends in lithium-ion battery technology and expectations related to EOL that could impact findings of this baseline assessment

Kellen then reviewed the survey approach, expected outcomes and timeline for the SP/RBC landscape assessment project. It was noted that the SP/RBC survey will be strictly limited to information members are willing to share freely in the context of this project and that project members will determine if/how information is shared beyond the membership of SP and RBC at the project's completion.

Participants then discussed challenges/opportunities regarding EOL LIB management and shared several issues that SP/RBC might consider reviewing through this landscape or future projects, including:

- Educating stakeholders on recycling and safe handling practices (employees, consumers, suppliers, 3rd parties)
- Ensuring processes are scalable, relevant in long-term (considering expected changes in industry, vehicles and facilities of the future)
- Handling of waste materials by on-site employees / 3rd party waste handlers (identifying reuse / recycling outlets, communicating safety information to waste handlers)
- Impacts of design considerations on EOL and safe handling issues, minimizing unintended consequences
- Recapturing LIB from 3rd parties and ensuring safe handling throughout process

- Recovering materials for use in new products (process, quality, cost)
- Refurbishment / remanufacturing opportunities (process, quality, cost)
- Second use applications in renewable projects (e.g. Toyota Yellowstone project)
- Safe handling and return process for prototype materials provided to suppliers for testing purposes

ACTION ITEMS

- SP and RBC will work with Alessandra Carreon and Adam Muellerweiss to develop an outline of the landscape assessment survey.
- SP and RBC will work together to schedule a follow up call / meeting to share the draft outline and seek input from work group members. Following a comment period, SP and RBC will incorporate submitted comments as appropriate, and begin surveying member companies by the 2nd Quarter.
- An executive summary of the assessment results will be shared with SP and RBC members for review and comment by June 31, 2018. Members will determine if/how findings are shared with others outside the group, and if additional research or follow-up is required to expand upon the data obtained from this project.

The meeting adjourned at 12:30pm CST.

Respectfully submitted,

Kellen Mahoney
Program Director

Attendees

Joe	Stalnaker	Avangard Innovative	Doug	Andrews	Lear / IMA
Shane	Thompson	Battery Solutions	John	Howes	Redland Energy Group
Jim	Laney	DENSO International America	Pat	Hayes	Responsible Battery Coalition
Tim	Juliani	Edison Energy	Tim	LaFond	Responsible Battery Coalition
Ben	Landry	Edison Energy	Steve	Hellem	SP
Gary	Vegh	ERA Environmental	Kellen	Mahoney	SP
Alessandra	Carreon	Ford Motor Company*	Carole	Mars	The Sustainability Consortium
Sue	Rokosz	Ford Motor Company	Kevin	Butt	Toyota Motor North America
Kyren	Gardner	General Motors	Mark	Yamauchi	Toyota Motor North America
Peter	Karlson	General Motors*	Ellen	Shieh	UL
Phil	Cozad	Honda	Chuck	Shoopman	UT Institute for Public Service
Alissa	Yakali	Honda	Andrew	Jansing	Waste Management
Joel	Tenney	ICL IP	Matt	Phillips	Waste Management
James	Butler	Johnson Controls	Jerid	Shuryan	Waste Management
Adam	Muellerweiss	Johnson Controls*	Brian	Thurston	Waste Management

*by phone