



**Suppliers Partnership for the Environment (SP)
Responsible Battery Work Group Meeting
January 29, 2019**

DRAFT MEETING MINUTES

Kellen Mahoney, SP, called the SP Responsible Battery work group meeting to order at 11:30am EST. 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. Steve Christensen, Responsible Battery Coalition, provided an introduction to RBC and discussed RBC's collaborative relationship with SP. Participants then introduced themselves and shared their interests in mission of the work group.

Shane Thompson, Battery Solutions, discussed the company's connection to global trends toward a circular economy model. Shane discussed the collections / sorting model that Battery Solutions uses for small- and large-format batteries, and how this model may be applied to address emerging battery technologies. He then shared information on recycling processes for alkaline, nickel-metal hydride and lithium-ion batteries and current applications for materials recovered through these processes. Finally, he discussed opportunities for battery refurbishment and reuse and current research programs that are working to explore these opportunities.

Mark Drezdon, RSR Technologies, reviewed the process and science that has supported achievement of a 99% recycling rate for lead-acid batteries in North America and Europe. He highlighted differences in the chemistry and complexity of advanced vehicle batteries, such as Ni-MH and Li-Ion, and noted the potential impacts of those differences that will need to be considered in developing a scalable, economic recycling process for advanced vehicle batteries.

John Bradburn, ERA and Pathway 21, suggested that companies should not only focus on recycling of battery cells but adopt a systems-approach to support broader corporate zero-waste and sustainability goals. John discussed opportunities to repurpose large-format battery composite material dispositioning into wildlife habitat items and provided examples of how battery composite materials can be applied to support many different conservation objectives across global industry operations.

Kellen Mahoney then reviewed the objective of the SP Responsible Battery Work Group and briefly highlighted key outcomes from the first phase of the RBWG project. He then reviewed the objective and components of phase 2 of the RBWG project to develop a landscape assessment of key global initiatives addressing various aspects of responsible management of lithium-ion batteries used in vehicles, and shared initial observations of trends and gaps identified in that research.

It was noted that the phase 2 landscape assessment spreadsheet along with a refined presentation would be provided to RBWG members for review in the coming weeks and that SP would conduct a quick survey of RBWG members to prioritize next steps based on the phase 1 and 2 outcomes. Participants were asked for initial feedback regarding potential next steps to be considered and comments included:

- Provide forum for peer-to-peer mentorship on EOL management programs; ask for nominations of companies / programs which members would like to learn more from in future
- Organize site-visits to member facilities to share good practices
- Facilitate discussion between OEMs and recyclers on battery management goals and challenges; survey members to identify needs and solutions and facilitate connections
- Support discussion / research on Li-On remanufacturing opportunities
- Continue engagement with groups like Argonne and consider how RBWG may want to engage in Argonne's Li-On recycling programs and planned industry workshops
- Consider how to engage with academia to help industry learn from and engage with academic research on advanced battery recycling / re-use
- Consider how to engage other stakeholders, such as heavy trucks and buses, e-bikes, Tesla
- Explore issues related to advanced batteries used in industrial applications

Kellen then asked Carole Mars, The Sustainability Consortium, to discuss the process that TSC has used with other industries to map out a value chain. Carole shared information on TSC's process to bring different stakeholders together for an in-person value chain mapping exercise and noted that the process can lead to new insights and understanding across value chain segments. A number of attendees indicated that they would be interested in participating in such an exercise for lithium-ion batteries and it was suggested that SP would work with TSC to evaluate doing this in conjunction with the Q2 SP meeting in Indianapolis.

Next Steps

- SP will distribute notes and presentations from today's meeting.
- SP will finalize the Phase 2 RBWG deliverables and distribute to RBWG members, along with a quick survey to help prioritize potential next steps for the work group.
- SP will work with TSC to evaluate the possibility of organizing a lithium-ion battery value chain mapping exercise in conjunction with the Q2 SP membership meeting.

The meeting adjourned at 1:45PM EST.

Respectfully submitted,
Kellen Mahoney
Program Director