



Battery Industry Group (B.I.G.)
Terms of Reference

5th November 2019

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PURPOSE

This Terms of Reference (ToR) document describes the terms of reference for the Battery Industry Group (B.I.G.), specifically the background to the B.I.G. and expectations of B.I.G. members.

BACKGROUND

In August 2018, Vector convened the Battery Leaders Group to help inform the context for responsible end-of-life management of large batteries. The Group comprised stationary and electric vehicle (EV) battery stakeholders who were actively seeking end-of-life and circular solutions for large batteries: Audi, BMW, Tesla, Toyota, the Scrap Metal Recyclers Association of New Zealand (SMRANZ), Vector (chair) and Waste Management.

The Group fed into research commissioned by Vector from Eunomia Research & Consulting (Eunomia) on large battery chemistries, volumes and trends. The Group also participated in stakeholder interviews by global sustainability not-for-profit organisation Forum for the Future, who partner with Vector. Forum for the Future used the research and stakeholder insights to form three potential 2030 scenarios for large batteries, all presuming a future circular economy.

Vector invited the Battery Leaders Group and stakeholders from across the large battery value-chain to a *New Energy Futures Lab* workshop in December 2018. Using the scenarios, attendees identified opportunities in the new future circular ecosystem for large batteries and what needed to take place in New Zealand today to make this future happen. *A key need identified in the New Energy Futures Lab was for an industry-wide product stewardship scheme for large batteries.*

The final meeting of the Battery Leaders Group was held in March 2019, with members subsequently joining the Battery Industry Group (B.I.G.).

Vector summarised the research and insights discussed above in a *New Energy Futures Paper* with Technical Addendum on large batteries launched

on 28th November 2019. *The primary purpose of the Paper is to provide the context for B.I.G.*

The key aim of B.I.G. is to deliver a proposal for a ‘circular’ product stewardship scheme (i.e. a scheme which supports a circular economy) for large batteries, with a focus on lithium-ion.

A B.I.G. planning meeting was held in May 2019 and B.I.G. will formally kick off once a final ‘Stage II’ project plan (outlining investment by industry and a proposal for funding) has been submitted to the Ministry for the Environment in November 2019.

The Project Aims are to be delivered within 12 months of kick-off.

KEY DELIVERABLES

1. A proposal to the Ministry for the Environment for a circular Product Stewardship Scheme for large batteries which:
 - Provides flexibility (with adaptive pathways / scenarios which change with variables)
 - Offers recommendations on system requirements for the Ministry for the Environment
 - Is informed by trials of existing end-of-use and end-of-life management of large batteries and evidence
 - Delivers a Scheme design that can be readily implemented by the Ministry for the Environment
 - Aligned where possible with similar activities for small batteries
2. Delivers practical, evidence-based health and safety guidance

Other potential deliverables may include recommendations on: battery redesign (for Global Battery Alliance), standards and certification etc.

Scope of Product Stewardship Scheme

All large batteries including lithium-ion but excluding lead-acid batteries (as these have mature recycling systems in place). Where possible, a more technical definition aligned to international standards or certifications will be offered.

Large batteries include batteries from:

- Electric vehicles (EVs) including cars, trucks, buses, trains, planes, ferries
- Energy storage:
 - Network energy storage
 - Commercial / industrial energy storage
 - Home energy storage

The scope is likely to start at the 'import' stage of the battery value chain and include end-of-life management but this is to be confirmed.

B.I.G. will align with the small battery value chain where possible e.g. end-of-life management. However, small batteries are out of scope of the B.I.G. These include batteries from:

- Power tools
- IT equipment
- Appliances
- Toys
- E-bikes, E-scooters
- Etc.

B.I.G. VALUES & CONDUCT

Collaboration and trust will be key to achieving deliverables. B.I.G. members are expected to act honestly and in good faith at all times. As

mentioned above, members should acknowledge and disclose, and avoid, any conflicts of interest.

Core B.I.G. values:

- Integrity
- Inclusivity
- Collaboration
- Transparency
- Kaitiakitanga (stewardship)

STRUCTURE

B.I.G. members are within the dotted lines in the diagram below.

B.I.G. members will:

- Adhere to the B.I.G. Terms of Reference
- Self-organise
- Use appropriate online tools for communication e.g. SharePoint (internal) and website and LinkedIn (external)



FUNDING

WasteMINZ, as the Project Coordinator, will assume responsibility for the receipt and management of all funds.

Funding for the project will be from a combination of voluntary commitments by B.I.G. members and grants from funding providers such as the Ministry for the Environment (MfE) and the Energy Efficiency & Conservation Authority (EECA). In addition to funding already secured, other funding may be sought by the B.I.G. Project Coordinator if it is deemed that this is necessary to resource additional project deliverables. Current project deliverables are expected to be delivered on current funding as per the project plan.

Working groups, unless otherwise agreed, will be separately funded and self-governed.

Apart from the Project Coordinator and Research lead, other B.I.G. members will not be paid any fees or reimbursed for any expenses incurred in relation to work undertaken, unless that work and expense has been agreed by the Core Delivery Team and Governance Group.

B.I.G members may seek alternative funding sources (e.g. special research funds that their organisation can access) outside of those being sought by the B.I.G Project Coordinator but must seek written agreement from the Governance Group before proceeding with this.

ROLES & RESPONSIBILITIES

B.I.G. Core Delivery Team: Responsibilities

The Core Delivery Team members	Organisation	Role	Specific responsibility	Date from	Date to
Juhi Shareef	Vector	Chair	<ul style="list-style-type: none"> • Chairing B.I.G. 	Planning	End of project
Duncan Wilson	Eunomia	Lead Researcher	<ul style="list-style-type: none"> • Undertaking research to ensure we can deliver our Aims • Writing the Product Stewardship Scheme proposal and drafts 	Planning	End of project
Sarah Pritchett	WasteMINZ	Project Coordinator	<ul style="list-style-type: none"> • Project administration • Managing funding • Managing stakeholder relationships 	July	End of project

Core Delivery Team Relationship with, and Responsibilities to, Governance Group

The Governance Group holds B.I.G., specifically the Core Delivery Team (CDT), accountable for the delivery of the Project Aims listed above. The Governance Group requires:

- A monthly email update including updates on conflicts of interest (TBC by Governance Group)
- A quarterly phone call or meeting (TBC by Governance Group)
- Delivery of milestone reports and/or other documentation needed to meet the requirements of funders

The Governance Group will provide guidance, oversight and advice to B.I.G. members where necessary. As such, the Governance Group sits outside of B.I.G.

Core Delivery Team Relationship with, and Responsibilities to, Stakeholder Reference Group

The Core Delivery Team will share drafts of the Product Stewardship Scheme proposal with the Stakeholder Reference Group at agreed milestones.

Core Delivery Team Relationship with and Responsibilities to Wider Stakeholders

The Core Delivery Team will publish drafts of the Product Stewardship Scheme proposal with a request for stakeholder input at agreed milestones. Stakeholder input will be collated and reviewed. Any opposing views or conflicts of interest will be discussed by the Stakeholder Reference Group. If agreement cannot be reached, the Governance Group will make the final decision.

All members of B.I.G.

B.I.G. members will:

- Represent the values listed above
- Become familiar with systems thinking, product stewardship and circular economy concepts
- Be ambassadors of product stewardship and circular economy solutions for large batteries
- Provide timely feedback and relevant comment when requested
- Offer frank and open commentary and input to the process as appropriate (allowing for any constraints imposed by commercial confidentiality considerations)
- Fairly represent stakeholder opinion and not unduly advance their own agenda or issues.

Key responsibilities of B.I.G. Stakeholder Reference Group

The Stakeholder Reference Group (SRG) will be comprised of industry experts and key battery stakeholders.

The SRG will:

- Review drafts of the Product Stewardship Scheme proposal and other deliverables
- Provide feedback and expertise to the Core Delivery Team
- Provide support and advice where required
- Manage any opposing views or arising conflict of interest from CDT.

SRG members may form working groups as required, to inform and support the Aims of B.I.G. listed above.

Two groups that have been formed are:

- **Safety and Logistics Working Group (S&LG)** chaired by Fire & Emergency NZ (Peter Wilding)

Aim: Create clear, consistent safety guidance on handling, storage, removal of batteries from vehicles and energy storage systems,

transport, assessment, disposal and end-of-use / end-of-life management of second-life large batteries.

Guidance will be evidence-based and proportionate. The Working Group aims to support, not stifle, the use of batteries.

- **Battery Innovation Hub (BIH)** chaired by Vector (Jo Phillips)

Aims:

1. Connect second-life entrepreneurs with sources of second-life batteries
2. Trial innovative end-of-life management options including processing at Envirostream. End-of-life management providers will be treated equally and all requests for batteries for second-life projects will be considered (batteries provided must be deemed safe by trained personnel). This group will be separately funded by members.
3. Trial chain-of-custody technologies such as Blockchain.

Further groups which may be formed include:

- A **Technical Working Group** to cover recommendations for battery redesign, certifications and standards etc, using existing standards where possible.
- A **Customer Working Group** to bring together stakeholders who would be battery customers of large stationary or mobile batteries

Working Groups will meet in person / by phone / digitally as required. They will set their own working methods and will report into the Core Delivery Team on a monthly basis, to help inform the Product Stewardship Scheme proposal.

Key responsibilities of B.I.G. Governance Group

The Governance Group (GG) will be comprised of stakeholders who have governance experience and are industry stakeholders who have contributed funding to B.I.G.

Aim: To hold B.I.G., specifically the Core Delivery Team (CDT), accountable for the delivery of the Project Aims listed above, and to report to the funding parties on the delivery of the Project Aims.

The Governance Group will:

- Take on responsibility for the project's feasibility and achievement of outcomes, within the context of the Project Plan, of any funding documentation
- Oversee reporting to the funding parties on achievement of the Project milestones
- Review monthly email updates from CDT
- Participate in a quarterly phone call or meeting with CDT
- Ensure funding is properly managed and requirements of funders are met
- Ensure that B.I.G. adheres to the values listed above
- Manage any opposing views or arising conflict of interest from CDT or SRG
- Play a supportive role and remove any unnecessary barriers to progress by the CDT
- Meet deadlines as required by the Project Team
- Prepare for and attend Governance Group meetings for the duration of the project
- If unable to attend a Governance Group meeting, will delegate their Governance Group responsibilities and the conditions of these Terms of Reference to an appropriate person for the meeting.
- Maintain oversight of project risks and issues.

Governance Group Minutes & Meeting Papers

The minutes of each Governance Group meeting will be prepared by the Project Coordinator.

Full copies of the minutes, including attachments, shall be provided to all Governance Group members no later than 10 working days following each meeting.

By agreement of the Governance Group, out-of-session decisions will be deemed acceptable. Where agreed, all out-of-session decisions shall be recorded in the minutes of the next scheduled Governance Group meeting.

Key expectations of B.I.G. Advisors

B.I.G. Advisors will be comprised of the Ministry for the Environment and the Global Battery Alliance, a World Economic Forum project. While the Ministry for the Environment is expected to play an active advisory role, other Advisors may be engaged as required.

Advisors are expected to:

- On request, provide timely strategic and operational advice and guidance
- Review drafts of the Product Stewardship Scheme proposal
- Request specific changes to the project scope
- Keep B.I.G., particularly the CDT, informed of any relevant developments (e.g. new technologies, changes to policy etc) and key stakeholders
- Play a supportive role and remove any unnecessary barriers to progress

Key expectations of B.I.G. Stakeholders

B.I.G. stakeholders will comprise anyone who has an interest in large battery product stewardship. They are welcome to provide input to the CDT on drafts of the Product Stewardship Scheme proposal when they are

published. Relevant stakeholders may request to join any of the B.I.G. groups mentioned above.

Key expectations re. Additional Stakeholders

It is expected that learnings will be shared by B.I.G. with the wider community beyond B.I.G. stakeholders i.e. industry associations, at events, with smaller battery stakeholders etc.

B.I.G. members should inform the Project Coordinator when asked to share information externally and should ensure that information shared is consistent with the B.I.G. position and the B.I.G. Terms of Reference.

Expectations of All Parties

Conflicts of Interest

As soon as any party becomes aware of a conflict of interest they must state it in writing to the Project Coordinator who will maintain a conflict of interest register.

Measures must be put in place to ensure conflicts are appropriately managed. These may include:

- Abstaining from participation on matters pertinent to the interest
- Not receiving any information/data that could be used for personal gain
- Redacting sensitive information as appropriate
- Other personnel from the organisation or independent representatives who are not subject to the same conflict of interest substituting in meetings or dialogue
- Entering into non-disclosure agreements if in receipt of sensitive information

Meetings

Meetings are to be held only as required. The Core Delivery Team and each Working Group Lead will agree meeting structure with members.

Where meetings are required, B.I.G. members will self-organise and will make their best effort to attend meetings and to prepare appropriately.

Conflicts of interest will be the top agenda item at all meetings and the conflict of interest register will be circulated by the Project Coordinator prior to each meeting or teleconference.

Confidentiality

B.I.G. members, and the organisations they are representing, must keep confidential and secure all information disclosed to them in connection with their role as B.I.G. members, unless the information is already in the public domain or members are informed in writing that information can be shared. Governance group members must not disclose any such information.

For clarity, confidential information may be discussed internally, within B.I.G. member organisations, where technical, senior management or governance level direction is required.

B.I.G. members are able to discuss issues in confidence with the Core Delivery Team and / or Governance Group if necessary.

Requests for Information

If a B.I.G. member receives any request for information in relation to the project from a non-B.I.G. member, it must promptly refer that request to the Project Coordinator and advise the person who requested the information that the request was referred to the Project Coordinator.

GLOSSARY OF ACRONYMS

B.I.G.	Battery Industry Group
BIH	Battery Innovation Hub
BRANZ	Building Research Association of New Zealand
CDT	Core Delivery Team
EECA	Energy Efficiency & Conservation Authority
FENZ	Fire & Emergency NZ
GBA	Global Battery Alliance
GG	Governance Group
MfE	Ministry for the Environment
MIA	Motor Industry Association of New Zealand (Inc.)
OEM	Original Equipment Manufacturer (in B.I.G. context, often vehicle manufacturers)
PSS	Product Stewardship Scheme
SL&G	Safety & Logistics Group
SRG	Stakeholder Reference Group
ToR	Terms of Reference (this document)
VIA	Imported Motor Vehicle Industry Association
WEF	World Economic Forum

END