

## B.I.G. News #2 – 4 May 2020 Update from the Chair

Tēnā koutou

I hope you are all keeping well. For some of us, this has been a taste of our first Great Disruption - and what a test it has been of our national, institutional and personal resilience. I am keenly aware of the impact of Covid-19 on our businesses and communities, both in NZ and abroad. While it's wonderful that the planet has had some time to breathe, with **global carbon emissions set to drop by 4%**, of course many of us are now thinking about **what happens next**. What do we want to retain from our lockdown experiences (more time with our families? Less traffic? more community spirit?) and what systems do we want to put in place, so we are **more resilient** in the face of a changing economic climate?

For me, the answer lies with **circular economy solutions**, with their emphasis on shorter, more transparent supply chains and local, distributed, small-scale manufacturing. I can't help but be relieved that this is the model that B.I.G. is aiming for: not more 20<sup>th</sup> century thinking, but a new, **circular product stewardship scheme for large batteries**. (To learn more, read [this Vector New Energy Future Paper](#) and the book [Doughnut Economics](#)).

So, I'm delighted that on 23<sup>rd</sup> April, the **Ministry for the Environment Deed of Funding was formally executed, providing \$97,200 funding to B.I.G.**, kindly administered by WasteMINZ. This, together with funding from EECA, Vector and the Motor Industry Association of New Zealand (Inc), will enable Eunomia Research & Consulting Ltd to work with B.I.G. members to design a circular product stewardship scheme **that works for industry**.

Also great news is that B.I.G. was referenced as an example of international best practice in a [Global Battery Alliance](#) white paper presented at the World Economic Forum Summit in Davos in February.

We have now kicked off and have **less than 12 months** to deliver an ambitious programme of work, managed by the B.I.G. Core Delivery Team. We ask for **your active contribution to help us deliver**. See Duncan's request for info below; we look forward to working together.

Juhi Shareef, Chair B.I.G.

B.I.G. Core Delivery Team – Kick off meeting on 29<sup>th</sup> April



Duncan Wilson, Eunomia  
Research & Consulting  
Research Lead



Juhi Shareef, Vector Ltd  
Chair



Sarah Pritchett, WasteMINZ  
Project Coordinator

## B.I.G. Product Stewardship Research Work Programme

It's exciting times as we kick off the core work in building a large batteries product stewardship scheme for New Zealand. To deliver this we have mapped out a detailed research programme.

There are three phases:

The first phase is an **overview phase**. It will consider international examples and the lessons that can be learned, as well as beginning to map what the value system (made up of value chains) actually looks like in NZ, and where the key change points and levers are likely to be.

The second phase drills down into the **dynamics of the value chains**. We will be aiming to understand chains of custody and responsibility, costs (and who bears them), and opportunities to recover costs. During this phase we will also seek to understand consumer and end user motivations and how they will potentially interact with a product stewardship scheme, so we can design a scheme that works for users of big batteries.

The third phase is where it all comes together and **the preferred design for a product stewardship scheme will be constructed**. This will cover the scheme structure (i.e. the pathways batteries will take and how they will be funded), the type of organisation and scheme managers needed to run the scheme, regulatory requirements, and roles and interactions for all stakeholders. Also during the third phase, parallel work being done by the Battery Innovation Hub and the Safety and Logistics Working Group will be completed and fed into the scheme design.

Key to the project will be making sure the research reflects the collective knowledge and wisdom of all the stakeholders. Your contributions will be vital. At various points we will specifically seek your views or expertise, but **if at any time, you come across information that could be of value to the project please get in touch**.

For the first phase, **any information you have on international case studies or examples would be really helpful**. We are also likely to get in touch with many of you to better understand the large battery value chains in NZ and how you fit in.

Thank you in advance for your engagement.

- Duncan Wilson, Eunomia, Lead Researcher for the B.I.G. project

## BIH Update

Prior to lockdown, work was underway on shipping batteries for end-of-life value extraction for batteries not suitable for re-purposing and we're hoping to resume this as soon as possible and report back to the group. We'd also begun work on the methodology to track the battery through the chain of custody. Due to the number of stakeholders involved, the current focus on post-Covid recovery for most businesses, we'll reassess how this project is approached.

One of our members, Astara Technologies, is getting ready to resume their work on re-purposing batteries for second-life applications. They're looking to source large format batteries, preferably automotive, from a range of suppliers to further develop their diagnostic and testing facilities. They're interested in any used batteries you might have, ideally those that are not fully depleted but have faulted or require further testing. They're happy to sign an NDA and we'd put both parties in direct contact to make any arrangements necessary.

- Jo Phillips, Chair BIH

## Member Newsflash

Check out a report on EV statistics from **Strategic Lift**:  
<https://tinyurl.com/NZ-XEV-Report1>

## S&LG Update

Last year it became clear that while most Safety & Logistic Group members are happy to be kept informed, they were unable to take an active role in helping to review and develop the guidance documents. As an alternative way to achieve this, funding was sought to support research that would enable the production of guidance to both industry and regulators based on international experience, research and codes.

Unfortunately, in the current climate funding is extremely restricted so we will therefore be liaising with the B.I.G. Governance Group to identify workable solutions. In the meantime if you have any time to contribute to the project or if you come across any news or information re. safety and logistics for large batteries, particularly lithium-ion, please contact:  
sarah@big.org.nz

In a development, Fire and Emergency NZ has advised they have amended their reporting system to help improve the quality of data being captured about energy storage system and battery related incidents in New Zealand. This will aid our understanding of the incidence and impact of these incident across our communities.

- Peter Wilding, Chair S&LG

## RESOURCE LIBRARY

The following papers are in the BIH resource library:

- Zhang, Cheng (2019) Feasibility Analysis of Electric Battery Repurposing for Battery Energy Storage (University of Canterbury)
- Electrek (2019) 8 lessons about EV battery health from 6,300 electric cars
- EECA (2017) Factsheet on EV Battery Life report
- Hauke Engel, Patrick Hertzke, and Giulia Siccardo (2019) Second-life-EV-batteries-Thenewest-value-pool-in-energystorage
- Shute, Gareth (2019) The NZ company giving early model e-vehicles a much needed jumpstart (article from The Spinoff)
- University of Warwick (2020) Used Nissan LEAF batteries given “second life”
- Energy Storage News online (2019) Market and technology development of stationary battery storage systems in Europe

## RESOURCE LIBRARY

The following papers are in the S&LG resource library:

- ASNZS5139-Standard for electrical installations of battery systems for use with power conversion equipment
- CSIRO (2019) Storage safety performance study report
- Energy storage news online article (2019) Energy storage fire safety codes to go into effect in New York
- Energy storage news online (2019) US National Fire Protection Associations standards
- FENZ (2020) Lithium Batteries report
- Mikolajczak et al (2019) Li-ion batteries hazard assessment
- Larsson et al (2017) Toxic fluoride gas emissions from lithium-ion batteries
- Relevant UL Battery Standards for Air Carriers 2018
- Wojtas, B & I Jilani (2019) Presentation on Product Safety Standards in Transportation
- ULCT (2019) Lithium-ion battery safety tips
- NFPA (ND) Lithium Ion Battery Safety factsheet

## DO YOU HAVE ANY NEWS OR RESOURCES TO SHARE?

Please email [sarah@big.org.nz](mailto:sarah@big.org.nz) if you have any news to share or to upload anything to the resource library. We'd love to hear from you!

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