



Merri-bek
City Council

Powerlink: Linking Council assets to neighbourhood batteries

Stakeholder engagement – reflections, lessons learned and insights

12/08/2024

V1.0



About the project

With the help of [Neighbourhood Battery Initiative](#) funding (\$200,000), Merri-bek and Yarra City Councils have investigated the potential of Neighbourhood Batteries at Council-owned sites (*The Project*).

The business case scope included technical analysis (network connection, capacity, energy load profiles, existing solar, switchboard, battery size), commercial analysis, governance arrangements and community engagement. The 20 sites included a diverse range of facilities, metering arrangements, end-use types, anchor customer opportunities, and community benefit models.

The technical and commercial analysis were completed with reports provided by external consultants to the project team in July 2024.

Stakeholder overview

Stakeholder identification

As part of the project, it was decided that all engagement activities would primarily focus on the local government sector as the main stakeholder. This was due a number of reasons including:

- *Asset profile*- the kinds of assets chosen by both Councils (e.g. pavilions, civic centre, leisure centres etc.), their locations and usage type are very specific to the local government experience and unlikely to be similar of other sectors;
- *Risk appetite and tolerance profile*- again, due to Council's role within the community, the services it provides and strategic commitments to responding to climate change, this creates a rather unique profile specific to local governments; and
- *Priority of community benefits*- combined with the above, the value of non-financial benefits would be similar, compared to other potential neighbourhood battery proponents such as distribution network service providers (DNSPs) or electricity retailers

Engagement approach

Webinar

The main activity to engage stakeholders was to conduct an online webinar, with the aim to provide the results of the key activities that were undertaken as part of *The Project*. To ensure the invitation to the webinar reached as many potential stakeholders as possible, invitations were issued via the Victorian Greenhouse Alliance executive officers and coordinators.

Presentation:	NBI3 Powerlink - Linking council assets to Neighbourhood Batteries outcomes
Where:	Online via Teams
When:	Monday 29 th July 3pm – 4:00pm

Webinar attendee survey

At the conclusion of the webinar, a short series of questions relating to the contents of webinar were given to the participants to answer via an online survey tool (Mentimeter). Key questions that were asked are summarised in Table 1:

Question	Response style	Purpose of question
1. What best describes your interest/ commitments to neighbourhood/community batteries?	Multiple choice	To determine the status and level of commitment the survey audience had in relation to neighbourhood batteries
2. How helpful/useful were the following aspects of the Powerlink project? a) Overall project methodology b) NB commercial model research c) Approach to establishing needs and objectives to NBs d) Site findings and commercial modelling e) Lessons learned	Scale-based response	To determine how useful/ relevant the Powerlink project approach and outputs are for external stakeholders
3. What best describes the value your organisation attaches to non-financial benefits of NB's?	Multiple choice	To understand the level of importance of non-financial benefits of NBs for local governments vs financial benefits.

Table 1. webinar attendee survey questions

Providing key project outputs to stakeholders

The commercial report that formed the basis of the results of the presentation (by energy advisor's Energetics) was shared with all attendees. In addition, the report has been made publicly available via the online host – Basecamp which can be found here:

<https://public.3.basecamp.com/p/DpkXsj1qyY11RCpgXYWav4EH>

The webinar presentation slide deck (including raw results of the survey) have also been make available publicly, and can be found here:

<https://public.3.basecamp.com/p/dQacN1Rz3sNxKLxiujnszojL>

All project outputs have been published on the Neighbourhood / Community Batteries – Community of Practice forum hosted by the Victorian Greenhouse Alliances.

Results and reflections

A total of 37 representatives from 23 different organisations attended the webinar, with around 20-23 responses to each of the questions asked to the stakeholder group. The specific results for each question are captured in the following stakeholder engagement reflections.

Reflection #1 – there is strong interest in neighbourhood batteries within the local government sector.

When asked 'what best describes your interest/ commitments to neighbourhood/community batteries', 19/23 responses identified as either undertaking (9) or having completed a business case (5) or currently deploying neighbourhood/community batteries (5). This highlights that communicating the results with Councils at this time proved to align well with the sector's general activities in this space.

Furthermore, a smaller cohort of responses (3) were 'interested but at the very start/ had not started'. Therefore, providing not only the methodology that our project used, but also the results of

our investigations may be beneficial to them in terms of building their capacity and understanding prior to committing to a potential project.

Q. What best describes your interest/commitments to neighbourhood batteries?

responses: 23
who skipped question: 0

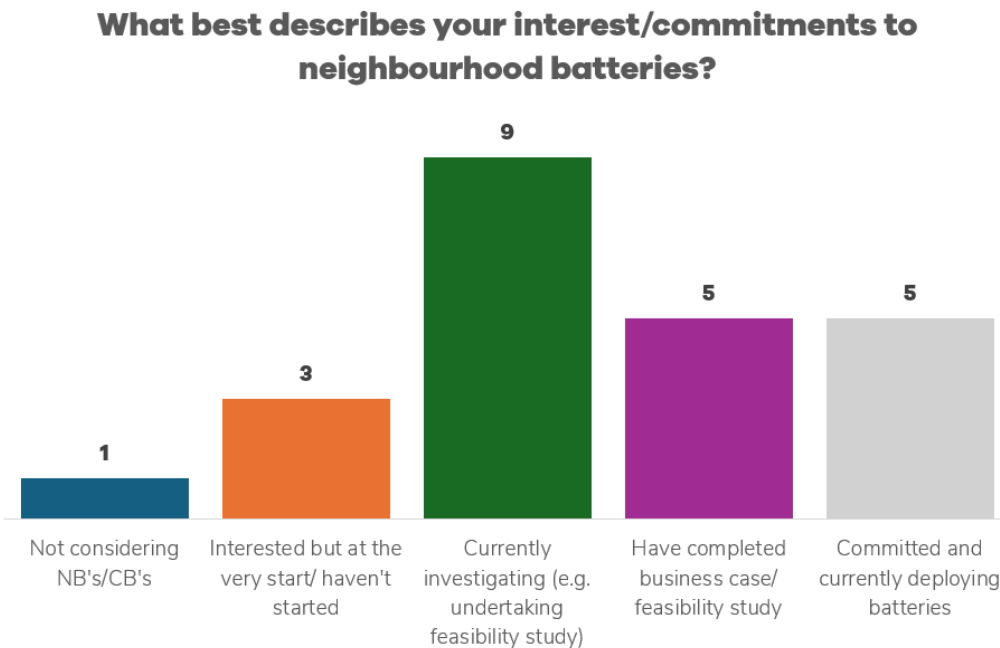


Figure 1. survey results from webinar question 1

Reflection #2 – the approach and outputs of this project provided broad benefit and value to stakeholders.

A second set of questions were asked of webinar attendees that were scale-based, in relation to the information presented during the webinar. The scale used ranged from 'not useful/helpful at all (1) through to extremely useful/helpful (10). Based on the responses provided, the information provided in the webinar and subsequent report demonstrated broad value to the stakeholder group. The average response to the questions ranged from 7.6 – 8.4 demonstrating high value of the content presented.

**Q. How helpful/useful were the following aspects of the Powerlink project?
Overall project methodology?**

responses: 20
who skipped question: 3

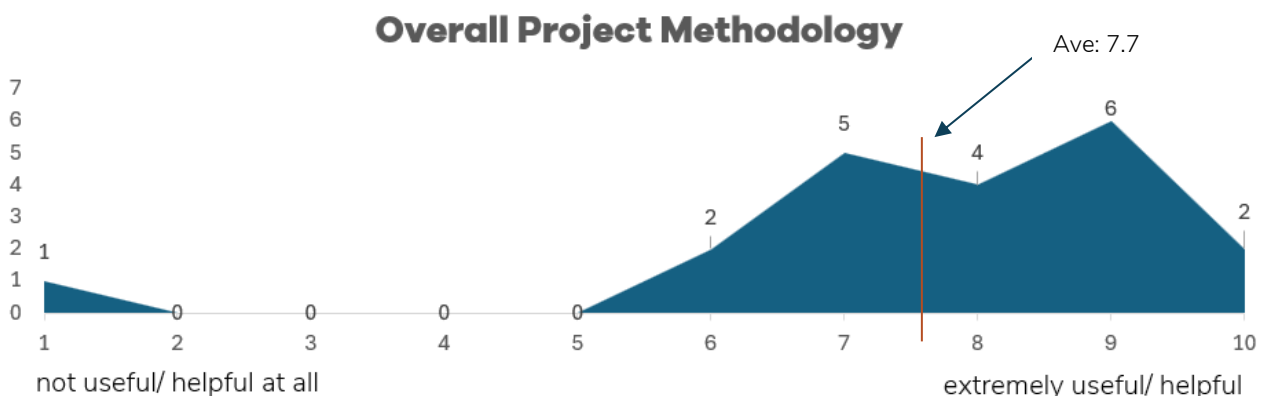


Figure 2 survey results to usefulness of project's methodology

**Q. How helpful/useful were the following aspects of the Powerlink project?
Approach to establishing needs and objectives to NBs**

responses: 21
who skipped question: 2

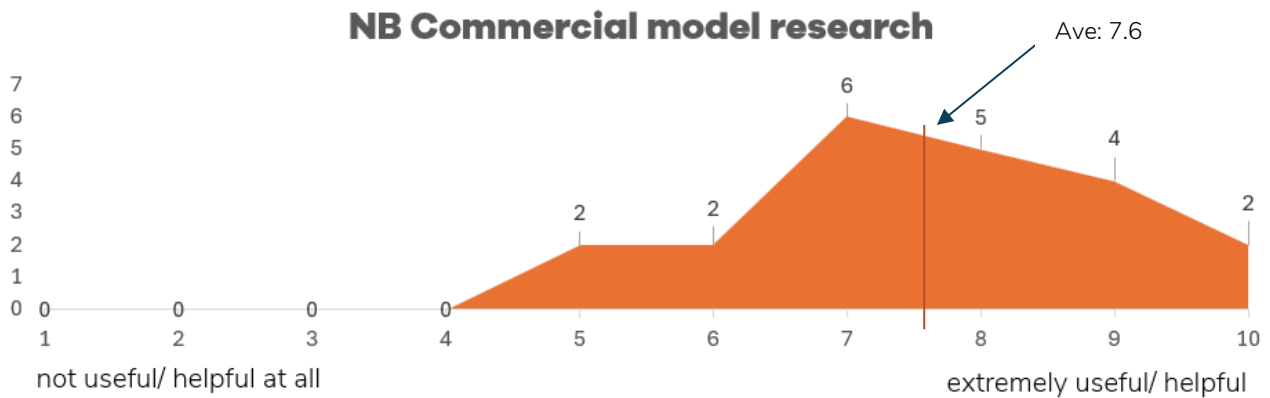


Figure 3 survey results to usefulness of project's commercial model research

**Q. How helpful/useful were the following aspects of the Powerlink project?
NB commercial model research**

responses: 21
who skipped question: 2

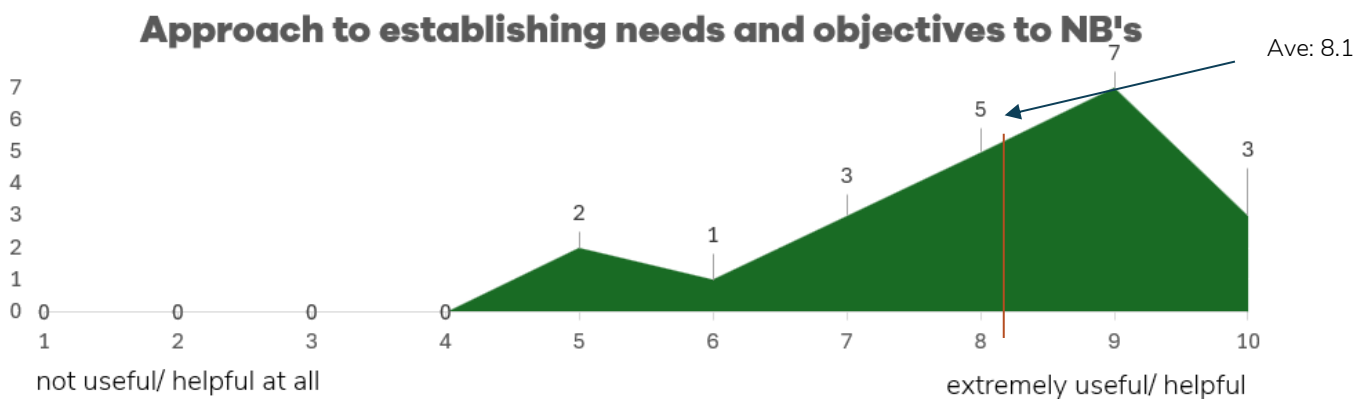


Figure 4 survey results to usefulness of project's approach to establishing needs and objectives

**Q. How helpful/useful were the following aspects of the Powerlink project?
Site findings and commercial modelling**

responses: 21
who skipped question: 2

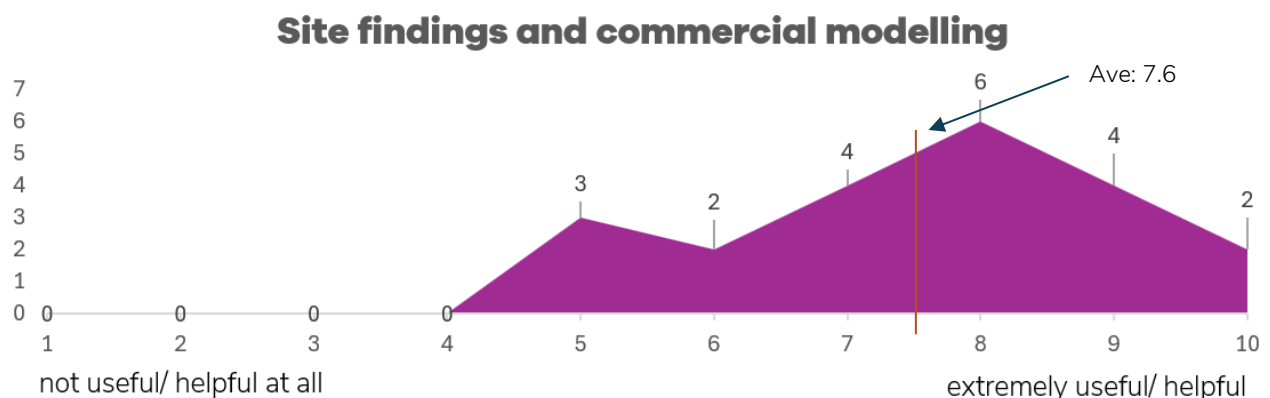


Figure 5 survey results to usefulness of project's site findings and commercial modelling

Q. How helpful/useful were the following aspects of the Powerlink project?

Lessons learned

respondents: 21

who skipped question: 2

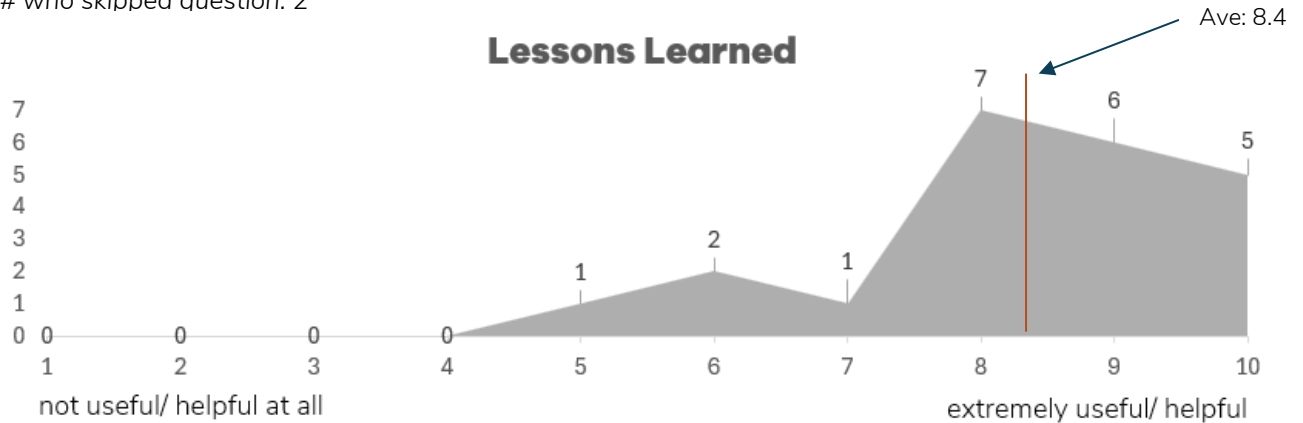


Figure 6 survey results to usefulness of project's lessons learned

Reflection #3 – there is sector interest to assign ‘value’ to non-financial benefits of neighbourhood batteries, but no clear method to do so.

The final survey question was developed in response to one the key financial outcomes of The Project highlighting that in many cases, the commercial models chosen did not attract a financially positive outcome over a 15-year period. This was due to the modelling only taking into account the financial aspects of capital costs and ongoing financial revenues and costs and excluding somehow calculating the value of non-financial benefits from an economic perspective.

Some of the non-financial benefits (excluding network benefits) that were identified as priorities for The Project included:

- Community access to renewables- such as increased rooftop solar hosting capacity
- Local rooftop solar benefits- such as reduced amount of export curtailment
- Emissions reductions- associated with reduced reliance of fossil-fuel based generation
- Avoidance of upfront costs of batteries for individuals

As such, a question was asked of the webinar attendees that was aimed at determining whether other organisations placed value on the non-financial benefits of neighbourhood batteries.

Q. What best describes the value your organisation attaches to non-financial benefits of neighbourhood batteries?

responses: 22

who skipped question: 1

What best describes the value your organisation attaches to non-financial benefits of NB's?

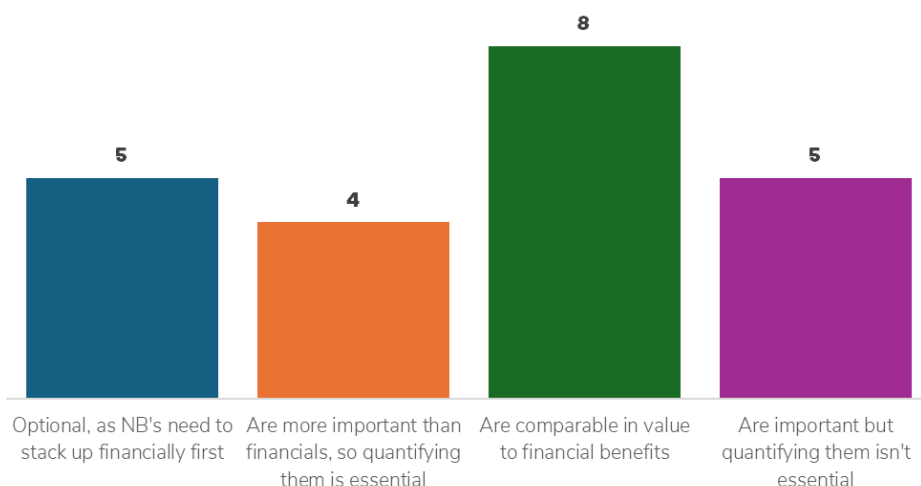


Figure 7. survey results from webinar question 3

As Figure 7 highlights 12/22 responses identified that non-financial benefits have a high level of value assigned to them. Another 5 responses signalled that they are important, but it isn't essential in quantifying them and 5 responses highlighted the need for neighbourhood batteries to be financially viable in the first instance.

With over 50% of responses there was merit in the idea of neighbourhood battery projects being able to calculate the non-financial benefits, the project team investigated ways this could be achieved:

Calculating broader economic impacts of neighbourhood batteries via a Cost Benefit Analysis (CBA)

One way of achieving this would be devise a method of determining the economic impacts for non-financial items of value that are potentially delivered through the deployment of neighbourhood batteries.

Example: Cost benefit analysis of road investments

The economic impacts of road projects often include 'opportunity benefits' in addition to the financial benefits and can include such items as:

- Travel time costs- savings associated with the project for the potential road users;
- Accident costs- arise when a project reduces either the expected accident rate (frequency) or the accident severity;
- Changes to vehicle composition- e.g. Road widening projects and highway upgrades can improve road conditions sufficiently to provide access to larger freight vehicles; and
- Road user cost savings- common benefits calculated including:
 - Flooding- improved flood immunity;
 - Reduced road/ lane closures;
 - Intersection upgrades; and
 - Reduced travel costs- e.g. from road infrastructure efficiencies, reduced delays in travel associated with passing through a town (bypass)

Example: Victorian Minimum Electricity Feed-in Tariffs

The *Electricity Industry Act 2000* requires that the Essential Services Commission (ESC) sets one or more minimum rates for the electricity that solar customers export to the grid. In addition to the prices of the wholesale electricity market and avoided transmission and distribution losses, since 2017, the calculation also includes placing a price of the avoided social cost of carbon and human health costs attributable to a reduction in air pollution.

“In February 2017, the Victorian Government issued an Order in Council (‘Order’) specifying a methodology for determining the social cost of carbon and the factors we must consider when applying this methodology.

It defines the avoided social cost of carbon as the avoided ‘cost per kilowatt-hour (kWh) of small renewable energy generation electricity purchased by a relevant licensee’ (e.g., retailer), determined in accordance with the following methodology and factors:

$$\text{Avoided social cost of carbon} = \text{Volume factor} \times \text{Price factor}$$

The volume factor, in the Order is an emissions intensity coefficient factor of 1.27 kilograms (kg) of carbon dioxide equivalent (CO₂e) per kWh of electricity exported by a small renewable energy generator. This means that 1.27 kg (or 0.00127 tonne) of CO₂e is assumed to be avoided for each kWh of electricity exported by a small renewable energy generator.

For the price factor, we have used the method specified in the Order to determine the value of a tonne of CO₂e. It results in a value of \$19.63 per tonne of CO₂e. The resulting avoided social cost of carbon is 2.5 cents per kWh¹.”

Example: National energy objectives guidelines – AEMC

The Australian Energy Market Commission (AEMC) makes and amends the National Electricity Rules that underpin the operation of the National Energy Market. Recent changes to energy laws have required the AEMC to not only recognise the importance of decarbonisation for the energy sector, but also to include an emissions reduction component when the commission makes decisions². Table 2 provides the value of emissions reduction that the AEMC uses when making decisions.

Year	VER (AUD 2023)
2024	70
2025	75
2026	80
2027	84
2028	89
2029	95
2030	105

Table 2. Value of emissions reductions (VER) used by the AEMC

Recommendation

That DEECA determine an appropriate Cost Benefit Analysis method of calculating some or all of the non-financial benefits associated with neighbourhood batteries, and publish this method so that potential funding applicants can measure the non-financial benefits associated with their project(s).

¹ P. 40 - [Minimum Electricity Feed-in Tariffs from 1 July 2024 determination report](#) – Essential Services Commission

² [How the national energy objectives shape our decisions](#) – AEMC – March 2024

Appendix i -List of organisations represented at webinar:

Brimbank City Council
Boroondara City Council
Central Victorian Greenhouse Alliance
East Gippsland Shire Council
Eastern Alliance for Greenhouse Action
Greater Metropolitan Cemeteries Trust
Hobsons Bay City Council
Hume City Council
Kingston City Council
Knox City Council
Manningham City Council
Maroondah City Council
Melbourne City Council
Monash City Council
Mornington Peninsula Shire Council
Nillumbik City Council
Northern Alliance For Greenhouse Action
Stonnington City Council
Surf Coast Shire Council
Western Alliance for Greenhouse Action
Whittlesea City Council
Wyndham City Council
Yarra City Council

Appendix ii -Email invitation to attendees:



INVITATION: Presentation - NBI3 PowerInk - Linking Council assets to Neighbourhood Batteries

With the help of [Neighbourhood Battery Initiative](#) funding, Merri-bek and Yarra City Councils have been investigating the potential of Neighbourhood Batteries at Council-owned sites.

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There were a number of fundamental questions that both Council wanted this project to help inform and answer including:

- What are each Council's priorities when considering neighbourhood batteries?
- What are the possible models of battery operation and how do these align with priorities?
- What are the site specific conditions, limitations and opportunities?
- How do the site specifics and commercial operating models impact on the potential upfront and ongoing operating requirements?

With these investigations complete, we'd like to share with you the results of our efforts, including the key outcomes of the consultant engagements, and what's potentially next for each Council.

Presentation:	NBI3 Powerlink - Linking council assets to Neighbourhood Batteries outcomes
Where:	Online via Teams
When:	Monday 29 th July 3pm – 4:00pm
How to register your attendance:	Microsoft Teams Merri-bek Join the meeting now Meeting ID: 449 585 115 51 Passcode: LRHMG

If you have any questions, please feel to contact the project team's representatives

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Hope to see you online!

Hugh Butcher, Nic Parry and Indy Linnam