

# Clean Energy Startup Support Programs Project

## Lessons Learnt Report #1

<b>Project</b>	EnergyLab: 2019/ARP056, EnergyLab Australia, Clean Energy Startup Support Programs Project
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## Executive Summary

EnergyLab's Clean Energy Startup Support Programs Project involves delivering four programs to help accelerate startups' progress in deploying renewable energy and complementary technologies. The four programs are detailed below.

<b>Program</b>	<b>Overview</b>	<b>No. startups</b>	<b>Mentoring</b>	<b>Events</b>
Pre-Acceleration Program	Helping early-stage entrepreneurs test the commercial viability of their idea and secure support to launch	16	While mentoring is not an official part of the Pre-Acceleration Program, EnergyLab's Chief Entrepreneur provides bespoke business coaching to each startup.	N/A
Acceleration Program	Supporting the most promising clean energy startups to launch their product, secure their first customers and raise a seed round	6	<p>Acceleration Program startups receive access to mentors via:</p> <ul style="list-style-type: none"><li>- in-person speed networking (4 sessions with approx. 6 mentors in each)</li><li>- virtual speed networking (7 sessions with approx. 6 mentors in each)</li><li>- one-to-one introductions</li></ul> <p>The mentors involved cover various aspects of the energy and entrepreneurship fields, including:</p> <ul style="list-style-type: none"><li>- energy utilities</li><li>- waste management</li><li>- consulting/advisory</li><li>- retail</li><li>- government and regulatory agencies</li><li>- capital infrastructure and investment</li><li>- clean energy startups and</li></ul>	Acceleration Program Showcase Event (30 October)

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			scaleups	
Scaleup Program	Connecting the world's best later-stage cleantech startups with potential partners and mentors, and helping them to raise a Series A round	13	Scaleup Program members receive feedback from investors and access to other mentors on request.	Scaleup Program Launch (4 September) and VIP Launch Event Preview (2 September)
Women in Clean Energy Fellowship	Equipping aspiring women entrepreneurs with the skills, knowledge and support they need to start a cleantech startup.	31 participants	Women in Clean Energy Fellowship participants received access to one mentor based in their home city (i.e. Brisbane, Sydney or Melbourne). The three mentors involved covered the following fields: - solar energy (hardware purchase and installation) - solar energy (data analytics) - power network asset management	N/A

Progress achieved from the Project's commencement (December 2019) to 'Milestone 2' (August 2020) included:

- Pre-Acceleration Program launched, recruitment completed, and delivery commenced
- Acceleration Program (re)launched, recruitment completed, and orientation and sales weeks delivered
- Scaleup Program launched and recruitment completed
- Women in Clean Energy Fellowship launched, and recruitment and delivery completed.

We've learnt a number of lessons in delivering this Project so far. These lessons provide valuable insight into how accelerator organisations like ours can most effectively support and mentor startups, help advance commercialisation pathways for renewable energy technology and increase renewable energy uptake by bringing value streams together.

## Lesson learnt 1: Acceleration program design

Through this Project, we've identified key components of our Acceleration Program that are crucial to its effectiveness in increasing the level of expertise, skills and capacity in the renewable energy sector. These critical components include mentoring, connections to prospective customers and partners, and development of foundational business skills.

We've also learnt a significant amount about delivering programs online, having shifted to a completely virtual model of delivery for our Acceleration Program during COVID-19. Our lessons learnt in relation to COVID-19 are detailed in a separate section titled 'COVID-19 lessons and adaptation' below.

Looking ahead, our experience suggests it will be important for acceleration programs to continue evolving to meet the needs of startups in the face of changing economic conditions, particularly those associated with COVID-19. Maximising mentor involvement in these programs would seem worthwhile, accompanied by some capacity-building to ensure startups are equipped to take full advantage of their mentors' offers of guidance and access to networks in the sector.

## Lesson learnt 2: Boosting commercialisation capacity

We've also learnt some more about the most common challenges companies face in commercialising their technology. For instance, the (often extensive) time, labour and capital required to develop a minimum viable product (MVP), as well as difficulties in obtaining an initial customer, frequently slow down startups' progress along their commercialisation pathways.

On the flip side, these challenges point to areas of high priority and potential for acceleration programs to assist startups in commercialising their innovations. Supporting startups to get their MVP to market as quickly as possible and helping startups to build a network of advocates in the sector are two tactics that, implemented well, will help ensure future acceleration programs are effective in improving the technology and commercial readiness of emerging renewable energy technologies.

## Lesson learnt 3: Renewable energy business and market development

Finally, our Scaleup Program experience highlights the value intermediaries can bring to the process of establishing bilateral partnerships and developing markets more broadly in the renewable energy sector. The 'matchmaking' role we play between clean energy startups and utilities has been demonstrated to help smooth the process (and reduce the costs) of establishing partnerships between these organisations.

Going forward, further consideration is likely to be required in a couple of key areas to ensure the market development benefits of this 'matchmaking' function are fully realised. These areas include potential roles for third-party intermediaries in fast-tracking the partnership execution

processes that follow initial introductions (e.g. contract negotiation/signing and technology deployment), and ways to maximise the number of 'demand side' actors involved as program partners.

## COVID-19 lessons and adaptation

With COVID-19 having begun in the period between this Project's commencement and 'Milestone 2', we have learnt a number of (somewhat unexpected) lessons and made a range of adaptations as required.

In program delivery terms, our main adaptation has been to transition to an entirely virtual way of working, with accompanying changes made to scheduling, preparation and network-building. We have also shifted to a virtual mentoring model and, despite our startups encountering some potential challenges related to building deep relationships with new mentors in an exclusively virtual environment, have seen the value derived from these relationships remain high.

As the COVID-19 situation has evolved, we have learnt about the main challenges it presents for startups, often related to the procurement of materials/components for developing their Minimum Viable Product and/or achieving enterprise sales. Some significant knowledge gaps remain, however, as to how these challenges are likely to change in terms of the knowledge and skills that will be most critical for startups going forward, and how startup support organisations like ours will need to pivot in response.

## Key Learnings

### Lesson learnt 1: Acceleration program design

**Category:** Technical/Operational

**Objective:** Increasing the level of expertise, skills and capacity in the renewable energy technology sector by supporting and mentoring startups

**Detail:**

#### What we've learnt

This Project has provided an opportunity for EnergyLab to test and verify the effectiveness of our Acceleration Program in supporting and mentoring clean energy startups. Our learnings - based on participant feedback on the program's 'build' and 'sell' modules - include:

- **Mentoring is a key contributor to startups' success.** Startups participating in our Acceleration Program receive access to mentors, including renewable energy experts and experienced entrepreneurs, as part of their program activities. This has been (and continues to be) highly beneficial for participating startups, with founders deriving substantial value from the mentors' expertise, advice and strategic guidance as they build and grow their businesses, often in uncharted territory.

During the period covered by this Lessons Learnt Report, areas of particular focus (and potential benefit) for the mentoring made available to startups in the Acceleration Program included sales and marketing, obtaining investment and clean energy entrepreneurship.

- **Connections are critical.** Startups place a high value on the introductions/connections to potential customers and partners available through the Acceleration Program.
- **Business fundamentals proved essential to success.** While our program's focus on building capacity in the legal and financial aspects of business management might not generate much excitement, participating startups recognise it as making a necessary and valuable addition to their skillset.

### Remaining knowledge gaps

Monitoring (and responding to) how startups' knowledge/skills/support needs are evolving in the face of COVID-19 and associated economic changes remains a key challenge, and is discussed in the section titled 'COVID-19 lessons and adaptation' below.

### Implications for future projects

Our learnings from delivering the Acceleration Program suggest a number of potential considerations for the design of equivalent/similar programs by EnergyLab and others in future. These include:

- **Mentor involvement should be maximised.** The significant value startups have gained from mentor relationships established through the program indicates the importance of continuing (and, where possible, maximising) this aspect of future acceleration programs.

We're currently reviewing the mentoring component of our programs (including the Acceleration Program) to ensure it is as effective and impactful as possible for our next intakes. As part of this review process, we will be looking at tactics to optimise mentor involvement - these may include:

- Surveying prospective mentors to learn what types of clean energy startups they are most interested in offering their expertise/experience to. This would allow us to identify additional (and more targeted) pairings of mentors to founders, and increase the chance of those pairings being as productive as possible.
  - Increasing the involvement of mentors in program activities (e.g. as workshop facilitators).
  - Maximising the number of speed networking sessions run with mentors for each Acceleration Program cohort.
- **Startups may benefit from some more support in utilising their mentors.** For particular startup cohorts (especially those with less experienced founders), it may be worth amending future programs to include some content focussed on building startups' capacity to derive optimum value from their mentoring relationships. To be most effective, this content should focus on startups' capacity to derive value both in terms of access to experience/expertise, and to connections with potential customers/partners.

Strategies for providing this support to startups in utilising their mentors may include:

- Providing guidance material for founders on how to approach mentoring conversations (including advice on recommended preparatory work, discussion topics and follow-up actions)
- Providing opportunities for founders to practise mentoring conversations with the EnergyLab team and/or other advisors
- Engaging a mentor to present on effective 'mentee-ing' tactics.



- **Keep the basics, and iterate as able.** From the perspective of giving startups the best chance of staying robust and productive (particularly during these times of economic uncertainty), our Acceleration Program’s basic ‘building blocks’ of business skills development, coaching, mentoring and networking all seem to have ongoing relevance. Organisations delivering acceleration-type programs will, however, need to remain open to iterating/adapting in response to changing economic conditions to ensure their programs continue to offer their startups the best chance of success.

Some potential economic changes/challenges and implications for our Acceleration Program are outlined below.

Economic change/challenge	Acceleration Program implications
<p>Reduced domestic and international economic growth due to COVID-19, leading to supporters of the renewable energy sector (i.e. potential customers for our startups) having:</p> <ul style="list-style-type: none"><li>● Less money to spend on clean energy technologies</li><li>● Lower risk appetites</li><li>● Less attention available to engage with and support clean energy startups</li></ul>	<p>Ensure startups are aware of the economic reality they face (and its potential impact on their ability to generate revenue) through formal presentations (and, where appropriate, casual conversations) with industry experts.</p> <p>Ramp up the focus on tactics to overcome barriers to making a sale during times of economic uncertainty, including:</p> <ul style="list-style-type: none"><li>● Communications and marketing</li><li>● Pipeline development</li><li>● Go-to-market strategies</li><li>● Ways to de-risk a startups’ product/service offering (particularly for first/early customers).</li></ul>
<p>Reduced availability of early-stage startup funding/capital</p>	<p>Ramp up the focus on investment readiness to put our startups in the best position possible to fundraise in an increasingly competitive capital-raising environment.</p> <p>Maximise opportunities for our startups to meet and build relationships with potential investors through the program.</p>
<p>Supply chain changes and interruptions</p>	<p>Equip startups to build resilient supply chains that, while suiting current global and domestic economic conditions, are flexible enough to accommodate changes and enable the startups’ continued operation.</p>

Given our experience with this Project so far, these implications (as well as those outlined above regarding maximised mentor involvement and value derivation from mentoring relationships) offer significant potential to help startup accelerator organisations like ours increase the level of expertise, skills and capacity in the renewable energy technology sector.

## Lesson learnt 2: Boosting commercialisation capacity

**Category:** Technical/Operational

**Objective:** Improving the technology readiness and commercial readiness of renewable energy technology by identifying pathways to commercialisation

**Detail:**

### What we've learnt

In delivering EnergyLab's Acceleration and Pre-Acceleration programs, we have supported a range of startups to identify commercialisation pathways for their renewable energy technology. Importantly, we've also gained significant insight into the key challenges cleantech startups face when commercialising, including:

- **Availability of resources for MVP development.** The highly technical nature of many clean energy startup ideas often means that developing a minimum viable product (MVP) requires large amounts of time, labour and capital. Overcoming each of these hurdles generally takes significant time and effort from the founders, leading to extended (and, sometimes, infeasible) commercialisation timeframes.
- **The 'first customer' hurdle.** Startups commonly struggle to find an initial customer willing to pay for their product/service, which is often still in development or at the MVP stage. Without this first customer, other steps to commercialisation (e.g. product refinement and capital raising) are much more difficult to progress. During COVID-19, this has been particularly evident for startups with business-to-business (B2B) business models, who have needed to put greater amounts of effort into engaging with key decision-makers at potential client organisations to achieve their first (or first few) sales.

### Remaining knowledge gaps

University-based research provides the foundational Intellectual Property (IP) for a large number of renewable energy startups, and we see great potential for accelerators like EnergyLab to help drive its commercialisation. Beyond recruiting ex-researchers into our programs as company founders, however, it is not yet clear exactly how organisations like EnergyLab could most effectively facilitate such IP transfers from universities to startups.

To identify potential opportunities to help facilitate the transfer of university-generated IP into clean energy startups, we are:

- Cultivating close working relationships with universities including the University of Technology Sydney (UTS) and the University of Melbourne.
- Participating in the Reliable, Affordable Clean Energy (RACE) for 2030 Cooperative Research Centre as an industry partner alongside universities and a range of other organisations.

- An active participant in the Australian cleantech startup support ecosystem - alongside other accelerators, universities, government agencies - ensuring we are well-placed to identify and realise opportunities to collaborate and help facilitate the transfer of IP from research institutions into startups.

### Implications for future projects

The insight we've gained into the commercialisation challenges faced by clean energy startups suggests a couple of key implications for future projects of this nature. These include:

- **Support startups to get their MVP to market ASAP.** Being able to offer a product or service for sale as soon as possible enables startups to bring their first customer/s on board early. This then unlocks opportunities for revenue generation, product feedback and improvement, as well as further capital raising. It also limits the amount of time, labour and capital 'burnt' on MVP development, encouraging higher rates of productivity, iteration and innovation (ultimately, a faster route to successful commercialisation).

Strategies for consideration to help support EnergyLab startups to develop their MVP as quickly and efficiently as possible include:

- At the beginning of the Acceleration Program, undertake targeted matching of startups to mentors that have expertise/experience in areas required for their MVP development specifically
  - Partner with suppliers of products/services commonly required by startups for MVP development to fast-track their procurement processes (and, ideally, enable access to discounts or other assistance from the suppliers)
  - Provide case studies of successful MVP development from later-stage startups for Acceleration Program startups to model their own MVP development journeys on.
- **Help startups find (or create) advocates in the market.** As well as engaging with potential customers directly, it is worth encouraging and supporting startups to build a network of advocates in their sector. While these advocates may not end up as paying customers directly, their relationships and influence in the market may assist (e.g. via recommendations) a startup in achieving their first sale.

Incorporating each of these implications within our startup support programs will be key to our success (and that of similar accelerator organisations) in supporting startups to identify (and travel down) pathways to commercialisation as quickly and efficiently as possible.

## Lesson learnt 3: Renewable energy business and market development

**Category:** Technical/Operational

**Objective:** Increasing the value delivered by renewable energy by bringing together multiple value streams to help develop technologies, businesses and markets to reduce cost and increase renewable energy uptake

**Detail:**

### What we've learnt

Our experience designing and launching the EnergyLab Scaleup Program has highlighted how accelerator-type organisations can have significant impact in bringing together multiple value streams to help develop technologies, businesses and markets to reduce cost and increase renewable energy uptake.

In acting as a 'matchmaker' between startups and potential client organisations, we have realised significant potential to reduce renewable energy search and transaction costs in the utilities sector. Our approach to achieving these search/transaction cost savings has been to:

- Understand fully the corporate challenges/constraints faced by each potential client organisation (i.e. utility), and the solutions on offer by each participating startup
- Based on this in-depth understanding, identify utility/startup combinations early on that have a high likelihood of succeeding
- Facilitate introductions/interviews for each proposed utility/startup combination
- Monitor and, where required, support the establishment of a formal partnership between each 'matched' utility and startup.

Ultimately, this approach enables both parties to get on with establishing a partnership (and, ultimately, developing the broader market for renewable technology uptake) more quickly and at less cost for the utilities sector than would otherwise be the case.

We've also learnt that it is important to have a wide range of utility partners engaged to ensure this 'matchmaking' function succeeds. While this has made the program's design and administration somewhat more complex, having a broad range of partners on board has maximised our chances of finding a good fit for each utility and startup involved.

### Remaining knowledge gaps

While the Scaleup Program's 'matchmaking' approach reduces the initial search and transaction costs for startups and utilities to establish a partnership, questions remain as to how organisations like EnergyLab can help ensure the full value of these partnerships is realised as efficiently as possible. For instance, the most effective tactics for an intermediary (i.e. EnergyLab) to use in helping to fast-track processes like contract negotiation/signing and technology deployment may warrant further consideration.

### Implications for future projects

Our learnings have two main implications for future projects aimed at bringing multiple value streams together to increase the value delivered by renewable energy:

- **Intermediaries can add significant value to market development endeavours.** Having a third party available to expend time and effort understanding the requirements and challenges faced by actors on the ‘demand’ and ‘supply’ sides of the market (in our case, utilities organisations and clean energy startups, respectively) is worth considering. It’s likely that this third party will be able to help overcome the cost/time/bandwidth constraints that might otherwise derail potential partnerships and broader market development initiatives.

Potential approaches to developing this intermediary model for the future include:

- Broaden the intermediary model’s reach by seeking opportunities to apply it outside the utilities sector; to help facilitate partnerships between clean energy startups and organisations in other sectors with potential to implement renewable energy pilots/projects at scale (e.g. manufacturing and agriculture).
  - Offer EnergyLab’s learned expertise and experience to other organisations looking to perform a similar ‘matchmaking’ function to unlock opportunities for cleantech deployment.
  - Where possible, standardise and streamline the ‘matchmaking’ process implemented during the Scaleup Program to optimise its efficiency and scalability.
- **The more ‘demand side’ actors on board, the better.** When facilitating introductions and partnerships aimed at developing renewable energy/technology markets, seek to maximise the number of potential customer/client organisations involved (in our case, utilities organisations). This will help optimise the chances of making successful matches between ‘demand’ and ‘supply’-side actors, and increase the number of organisations involved in renewable energy/technology markets more broadly.

When applied to future iterations of our Scaleup Program (and other programs of a similar nature within the renewable energy sector), these implications hold significant potential to increase the ease and effectiveness which with multiple value streams can be brought together to help develop technologies, businesses and markets to reduce cost and increase renewable energy uptake.

## COVID-19 lessons and adaptation

Delivering the Project during the COVID-19 pandemic has also provided numerous learning opportunities beyond our 'business-as-usual' scenario.

### Program delivery changes

Like many businesses, EnergyLab's main adaptation during the pandemic has been to transition to an entirely remote & virtual delivery model for all our programs. The specific changes we made to adapt to COVID-19 are outlined below:

- All program activities were delivered online from March 2020 onwards (mostly via Zoom). This includes workshops, group discussions, business coaching, speed networking and events.
- In some instances, the shift to online delivery prompted a change in scheduling approach. With people's attention spans typically shorter online, attempts were made to keep virtual sessions as time-efficient as possible.
- Additional time was allocated to preparing for and executing online activities where needed (e.g tech rehearsals and scheduled 'warm up' time before important virtual sessions, to ensure all technical logistics are in place and tested before officially starting).
- With opportunities for in-person networking among the program cohorts no longer available, we encouraged all participants to connect directly with their peers via EnergyLab's online communication/collaboration platforms to help ensure they still received the programs' network-building benefits (this was particularly successful among our Women in Clean Energy Fellowship cohort).

### Virtual mentoring

In addition to these program delivery changes, we've also fine-tuned our approach to facilitating mentoring relationships for startups to ensure it can continue during COVID-19. In particular, we've introduced virtual speed networking opportunities for Acceleration Program startups to meet renewable energy experts and experienced entrepreneurs, and continued to make one-to-one introductions on an individual basis.

In taking this approach, we've learnt that it is possible to continue cultivating valuable mentoring relationships in a virtual-only environment. In fact, the shift to virtual mentoring has offered startups some additional points of value (as compared to our previous in-person mentoring model), including:

- Access to a larger and more diverse pool of potential mentors (i.e. across geographic regions and time zones)
- Opportunities to meet a larger number of mentors through virtual speed networking sessions

- A more time-efficient way of connecting with mentors through removing the need to commute and coordinate between schedules that, in 'normal' times, are typically very travel-heavy (for both mentors and startups).

This shift to virtual mentoring, however, does have the potential downside that the connections startups form with their mentors might not reach the same level of depth (or, at least, not reach it as quickly) as they would in an in-person environment. Contributing factors here include:

- Limitations to the quality of communication achievable via phone/video calls
- Inability to easily arrange site/office visits when startups and mentors are geographically separated
- Lack of flexibility in terms of conversation duration (particularly during virtual speed networking, where adherence to pre-set conversation timings is critical for the session's logistics to work).

Despite these challenges, however, the virtual mentoring relationships we're able to facilitate through our programs continue to provide substantive value for startups, and will remain a point of focus for our Acceleration Program delivery during COVID-19.

#### COVID-19 challenges for startups

As mentioned in 'Lesson Learnt 1: Acceleration Program design', COVID-19 has triggered a range of challenges for startups related to the pandemic's effect on domestic and international economies. For some startups, the interruption to global supply chains has made procuring materials and components for their MVP more difficult and/or time-consuming (although, for others, various COVID-related shutdowns have actually allowed them the time and focus needed to make substantive progress!).

#### Anticipating future needs and changes due to COVID-19

As also mentioned in 'Lesson Learnt 1: Acceleration Program design', monitoring (and responding to) changes in startups' knowledge/skills/support needs during COVID-19 remains a key challenge. While we are committed to seeking and actioning feedback from our program participants on an ongoing basis, uncertainties surrounding the COVID-19 pandemic have made it more difficult to anticipate startups' needs and tailor program components accordingly. This has led to knowledge gaps including:

- What expertise and skills do startups need more of to survive (and, ideally, grow) during the pandemic and associated economic changes? How would we be best to integrate these into our programs?
- What expertise and skills are no longer as relevant in the current pandemic and economic environment? Can we remove time spent on these areas of expertise/skills from our programs without impacting their overall effectiveness?
- How can we best keep track of the answers to these questions as COVID-19 continues to evolve?