

Appendix 2:

Opportunities to Accelerate

This appendix summarises in detail the opportunities to accelerate community energy identified in our community co-design process

While community energy has existed in some form for many years in Australia, it has never benefited from a supportive policy framework at the national level. Australia's energy system was designed for large, centralised power stations and in recent decades has been dominated by both government-owned and corporate entities.

It is little surprise that a system designed without communities in mind has left communities out. As the **Energy Transition Hub** notes in its submission, the design of Australia's energy system has:

...traditionally centred around utility-scale generation and poles-and-wires solutions over locally oriented solutions, thus creating challenges for communities wanting to invest in their own energy resources and for their own local energy needsⁱ.

In our co-design process, we sought to identify the fundamental challenges facing community energy so that we could design a policy framework that responds to the actual problems on the ground. This was an experiment in bottom-up policy design.

Inevitably, some submissions identified fundamental flaws in Australia's energy policy that are holding back the overall transition to renewable energy in Australia:

- Difficulties accessing the grid and forced curtailment to maintain system security;
- Lack of national energy policy certainty suppressing investment;
- Failure to plan for the closure of large-scale synchronous generation.

However, our co-design process focussed specifically on the barriers to communities developing, owning and benefitting from renewable energy projects. We did not set out to solve all the problems in Australia's energy policy.

As such, the *Local Power Plan* takes as given the need to address over-arching policy and infrastructural barriers preventing greater integration of renewables into the grid.

Instead, this section focusses on the **five fundamental challenges** to expansion of community energy in Australia that we identified in our co-design process. For each challenge, we outline what we heard about the challenges facing community energy, and the opportunities before us to unlock that potential.

Opportunity 1: Deploy strategic capital investment

What we heard

Access to start-up capital was the mostly widely cited barrier to developing community energy projects. As every sporting club and Country Women's Association in the nation will understand, starting and running a new community group inevitably involves administration, communications and many other costs. But developing energy projects is expensive – researching technology, working with local stakeholders, preparing business cases.

Most community energy groups rely on government and philanthropic grant schemes to start up. But these sources of funding are piecemeal and limited, and existing grant schemes for community energy are clearly not fit-for-purpose.

Theoretically, community energy groups could apply for funding under both ARENA and CEFC, however, as **Enova** argued that **in practice community groups are excluded from these:**

Current avenues of funding both through ARENA and CEFC strongly favour large scale centralised approaches, with the hurdles for community groups to access those sources of funding being so high as to be almost insurmountable. There is a need for a different approach or a different funding body with different guidelines and the capacity to work with community scale organisationsⁱ.

Junee Community Power argued that complex grant schemes by definition **favour more established or well-resourced groups** at the expense of new entrants and in smaller regional locations:

The grant system as it is currently administered works against small community power bodies that are just getting started. They often lack the expertise and time in their volunteer base to write long winded grants. The first in priority system as in the recent Federal Governments Community Energy Efficiency Program was totally biased towards well-resourced communities who had the resources to drop everything and apply. Junee Community Power Inc tried for four days to submit its proposal before it was locked out. The grant system could be simplified by adding tiers to application processⁱⁱ.

Similarly, the **South Coast Health and Sustainability Alliance** argued that state-wide schemes systematically favour regions with the best renewable resources meaning **some parts of regional Australia are locked out:**

SHASA joined forces with Indigen to try and get funding from NSW for a 5MW community solar farm through the NSW Regional Community Energy Fund. We were not successful. It is hard to compete with projects from northern and western NSW which have better insolation. Now SHASA is working on a new proposal. Unfortunately, there are no grants currently open that we can apply for^{iv}.

Many submissions noted that delivering support through round-based, competitive grants not only **disincentivises resource-sharing** across community energy groups, but also meant many projects fail simply because there is **no funding available at the right time. Totally Renewable Yackandandah** noted that:

TRY has often reached a point where a specific project is required as the next step but there is no funding available from government or philanthropic organisations, thus necessitating either delaying or abandoning the project^v.

Similarly, **Totally Renewable Beechworth** said:

There are some existing funding programs, but they are often piecemeal, small amounts of money, and one-off opportunities. This means groups miss out when they aren't grant ready, yet there is no incentive for a largely volunteer base to invest time in project preparation without a guarantee there will be funding available later on. If there was a ten-year program, with funds allocated to different stages along the project development cycle, community groups would have the certainty that when they get to a certain stage, there will be funding available^{vi}.

Similarly, David and Kay Blore from **Renewable Energy Benalla** explained that:

The issue with grants is knowing when/if they might be available, how they might be utilised (i.e. we don't very often have "shovel-ready" projects just sitting waiting) and competing against larger, well-resourced entities for the limited pool of funds, often available only within a short timeframe^{vii}.

For early-stage groups, navigating complex and changing eligibility criteria. For instance, **Yea 2030: Community Energy**, just six months old, stated:

Another barrier that we have found is navigating funding opportunities from various organisations. Eligibility, definitions and types of projects all vary, and getting our group set up and started has taken time and energy. A more stream-lined approach to community energy grants would be very helpful^{viii}.

Those groups that were able to access grant funding demonstrate the immense value that relatively small amounts can deliver. For instance, the **Manilla Community Energy Group** said:

We received \$50,000 from the NSW government, which allowed us to do a successful feasibility study of our projects, the grant was pivotal to our success and gave us the freedom to develop ideas^{ix}.

However, these success stories are the exception that proves the rule. Our finding that grant funding is inadequate corroborates existing research into the community energy sector. In their submission **Beyond Zero Emissions** outlined the results of previous study that found lack of early-stage funding was a primary barrier to community energy projects:

The lack of access to early-stage funding was found to prevent project ideas from getting to the point of building a solid business case. Reasons for this include: high risk, unreliable early stage grant availability, lack of community energy targeted grants^x.

The Opportunity

Many submissions argued that any system of providing financial support to community energy groups should be driven and designed by the community energy sector. Here is what we heard about what such a scheme should look like.

A well-designed grant scheme should involve **different tiers of support for groups at different stages of maturity**. For instance, **Karin Stark** argued that grants should be available for early-stage project development:

This funding can go towards the early stage development of a project, looking at feasibility of projects, site selection and which business model would work best. It would

also be helpful if it could cover some of the planning costs in connecting to the grid, or working out how [virtual power plants] or [power purchase agreements] could work in practice^{xi}.

Many submissions argued that grant-based support should be only delivered temporarily because appropriately designed start-up support should empower **community energy groups to self-finance future projects**. For instance, **Sustainable Upper Ovens** stated:

Over the long term, with initial, grant support, build a fund so that a community can self-fund the replacement of energy infrastructure e.g. inverters after 10 years and solar PV panels after 20 plus years without organisation having to fundraise or seek grants^{xii}.

The notion that community energy should long-term be self-financed through revolving loan funds was widely echoed. Adelaide-based **CORENA**, which has run a successful revolving loan fund since 2012, argued that better access to grants would enable significantly more impact:

Governments can leverage more value and more volunteering into communities by providing pro-rata financial support. We have applied for numerous grants and competitions but have been unsuccessful to date. If we had a small amount of support we would use it to improve our volunteer management and our marketing. We believe we have proven a very successful model and could achieve so much more with a little bit of support^{xiii}.

Russell Sully from **Wangaratta Landcare and Sustainability** called for initial costs to be supported by Government with groups themselves taking on an increasing share as they develop successful projects:

Government seed grant funding for start-up community energy projects in initiation and social feasibility stage then moving towards a sliding scale cost sharing basis on further stages would seem a clear role for government investment to create a long-term community fiscal legacy. Seed grants to work through the early stages with government co-investment on a sliding scale as the project transitions through the more advanced stages^{xiv}.

Totally Renewable Beechworth called for long-term funding certainty so that groups could plan projects on a multi-year timeframe, with the assurance that if they need a grant, there will be support available:

If there was a ten-year program, with funds allocated to different stages along the project development cycle, community groups would have the certainty that when they get to a certain stage, there will be funding available^{xv}.

Energetic Communities, based in Queensland, argued that early-stage funding should enable groups to rely less on volunteers, instead employing project development officer:

Community energy groups currently rely on volunteers, especially in the early and otherwise capital-intensive stages of project development, which often rely on volunteer labour and expertise. Having a source of project funding, whether by grants or forgivable loans, would ensure a dedicated project officer and the appropriate and high quality and reliable legal, financial and technical advice^{xvi}.

Opportunity 2: Establish local hubs to provide on-the-ground technical expertise

What we heard

The lack of local technical expertise was almost universally cited as a fundamental barrier holding groups back. Developing a successful community energy project requires a vast array of expertise in engineering, law, regulation, business finance and community engagement.

This complexity exists even for relatively straightforward small-scale projects like a rooftop solar installation. More ambitious projects like community batteries and mini-grids require even more technical expertise.

As a result of the complex requirements involved especially in medium and large-scale projects, many community projects do not succeed. In their submission, **Renewable Albury Wodonga** outlined their experience in receiving an \$80,000 grant from the Victorian Government to develop a business case for a community-owned 2MW solar farm in Wodonga that would allow low-income households to access cheap electricity.

The project was initiated in 2015 but after working on the business case with Wodonga Council and contractors, RAW eventually determined the project was not feasible within their technical and resource constraints, deciding to terminate the project and return the grant to the Victorian Government.

The **Clean Energy Council** noted that in their experience, many groups experience similar difficulties:

While the [Totally Renewable Yackandandah] initiative has been a tremendous success, we acknowledge that getting community energy projects off the ground is not easy. Such undertakings require tremendous passion, drive and commitment, due to the considerable complexity associated with new energy developments – from planning and environmental approvals, to project finance, purchasing agreements, grid connection agreements, construction, operations and maintenance. As such, many community energy groups struggle to achieve the same level of success as TRY^{xvii}.

Different community energy groups emphasised different elements of the vast technical expertise required to pull off a successful community energy project:

- Entering into **legal contracts** such as power purchase agreements^{xviii}
- Understanding **regulatory requirements** of the grid and energy markets^{xix}
- Developing an **administrative capability** including a proper IT system to organise a large group of volunteers^{xx}
- Evaluating different **renewable technologies** to understand which technical solution was most appropriate for a given project and geography^{xxi}
- Understanding the needs of the **local distribution network** and how to engage with the network company^{xxii}
- Managing **complex, multi-year projects**^{xxiii}
- Developing a **compelling business** case attractive to community, government and commercial investors^{xxiv}
- Securing **support from local councils** through planning permission and in-kind support^{xxv}

Many groups explained that being reliant on volunteers fundamentally limits the amount of technical expertise they can access. Most community energy groups are not-for-profits, community

organisations or social enterprise, operated by volunteers – local teachers, civil servants, small business owners, farmers. However even if a community energy group does have members with specific expertise, relying on those people to volunteer that expertise is a handbrake on developing projects.

Ballarat Renewable Energy and Zero Emissions (BREAZE), who hosted the Ballarat Community Power Hub, noted in their submission that over the course of 3 years, their volunteers contributed \$270,000 worth of in-kind support, and this heavy burden contributed to volunteer burnout.

Groups such as **Renewable Energy Mansfield** and **Euroa Energy** similarly said that their members must balance family life and day jobs, with the complex task of designing and developing renewable energy projects. Even a group as successful as **Totally Renewable Yackandandah** noted that “the effort required by the dedicated band of volunteers has also been enormous and this burden has been significant”^{xxvi}.

The Opportunity

The co-design process revealed overwhelming support for the establishment of locally-based hubs with full-time, trained staff that can provide technical support to community energy groups. Broadly speaking,

Proposed functions of a local community energy hub included:

- Support for **new community energy groups** to establish themselves^{xxvii}
- Strategic technical advice on **procuring technology** like community batteries (Mitchell), renewable hot water systems (Jim Crosthwaite), solar gardens (RAW), biogas (AWCEEE)
- Collaborating with **local councils** to secure planning permits (RAW)
- Brokering **access to finance**, including preparing business cases, understanding and applying for grants, and attracting commercial and community investors (TRY)
- Working with **local businesses** to drive uptake of solar and battery technology (ZEN)
- Drive community involvement in **large-scale developments** particularly in Renewable Energy Zones such as in occurring in NSW (ENOVA)
- Liaise with **network companies** to help communities understand local grid requirements^{xxviii}
- Identifying and developing **successful energy projects** to help community energy groups become financially self-reliant (GV Community Energy)

Many groups outside Victoria and NSW, emphasise that local technical support must be **regionally-specific** and tailored for different state and territory regulatory regimes. For some time, the community energy sector has been dominated by Victoria and NSW and several groups noted the difficulties of accessing advice and templates suited to their states. For instance, the Queensland-based **Granite Belt Sustainable Action Network** explained that:

If we could get Queensland government support similar to all the work Sustainability Victoria have done but in a Queensland context, we think we'd get more interest from host sites. To paraphrase our Mayor, “everyone comes to us saying ‘they did this in Victoria’, but we need Queensland examples as this is a very different context”^{xxix}.

Similarly, WA-based **Tersum Energy** argued it was critical that any:

National community energy framework considers the regulatory and structural differences that exist between the [East and South Coast National Electricity Market] and the [West Australian Wholesale Electricity Market]^{xxx}.

More generally, the **Coalition for Community Energy** noted that both sector maturity and market structure would affect the type of support needed:

South Australia, Tasmania and Queensland, where fewer CE initiatives have occurred, will have differing priorities to Victoria and New South Wales. A strategy will take on new dimensions in Northern Territory and Western Australia where the relationships with electricity providers are significantly different^{xxxii}.

Some submissions noted that local hubs could facilitate greater connection between skills and training providers and the renewable energy industry in general. **Energetic Communities** proposed that local hubs could partner with training providers to establish Graduate Certificates in Community Energy and Microgrids. Similarly, the Wangaratta-based **North East Tracks Local Learning and Employment Network** suggested that:

The establishment of local hubs to deliver specialised support to community energy groups in the region, could also provide information and resources for young people to learn about the career opportunities in the renewables sector^{xxxiii}.

Many groups specifically called for an expansion of the **Community Power Hub** pilot program that ran in Victoria from 2017-2019.

Over two years, the Victorian Government invested \$900,000 into three Community Power Hubs (CPHs), in the Latrobe Valley, Bendigo and Ballarat. The purpose of the hubs was to identify community energy projects and support local groups to develop them.

In its formal review of the program, Sustainability Victoria found that the CPH were:

an effective means to catalyse community interest in renewable energy into tangible projects. Overall, the program has achieved all the desired objectives and outcomes, and delivered significant value across social, environmental and economic outcomes^{xxxiii}.

Over the two years, the three hubs delivered 15 community energy projects including solar panels for a local health centre and social housing, solar streetlights for a sporting reserve, solar and battery installation for an off-grid community that previously relied on diesel generators. Cumulatively, these projects represented^{xxxiv}:

- 1.35 MW of installed community energy capacity;
- \$364,000 in *annual* savings on electricity bills;
- \$14.5 million of value generated, representing a 13-fold return on Government investment;
- 1,838 tonnes carbon dioxide avoided each year.

Each of the three CPHs made a submission to our co-design process, and each called for an extension and expansion of the program. However, each hub made a suite of recommendations about how to enhance the program for a larger-scale roll-out. In its formal review of the scheme, Sustainability Victoria echoed many of these recommendations^{xxxv}:

- Adopt a **regional approach** whereby a single hub provides support to community groups in a region rather than a single town;
- Ensure a **physical presence** as well as a local online presence;
- Involve **less reliance on volunteer labour** and instead involve full-time paid staff, with appropriate training, to perform project management, administration, communications and engagement functions;

- Extend the timeline of hubs beyond the two-years to a **minimum of four years**;
- Allocate **greater funding** to accommodate increased geographical scope and full-time staffing, as well as more intense provision of in-kind resources;
- Increase focus of community energy groups as **co-investors in large-scale developments**;
- Allocate a small amount of grant funding to the hub to use as **seed funding** for capital costs to accelerate project development and crowd-in other sources of capital;
- Facilitate a **capacity-building program** to provide template resources, facilitate peer-to-peer learning across community energy groups.

Opportunity 3: Establish a centralised agency to enable capacity-building

What we heard

Whilst there are around 100 community energy groups across Australia, there is no formal mechanism for sharing information or resources across them. As a result, many groups are forced to start from scratch, replicate work unnecessarily and spend money on fixed start-up costs that could instead be shared across many groups.

Several younger or prospective community energy groups expressed an interest in structured learning from more mature groups, for instance, **Kinglake Rotary Club** was planning a study tour to Yackandandah to explore possible models that could be replicate in the Kinglake Ranges. Many groups advocated that formal support for a capacity-building program would significantly increase reduce start-up and project development costs and accelerate project timeframes.

According to the **Granite Belt Sustainability Action Network**, the lack of ready-made resources and captured lessons from other groups means barriers to entry remain higher than necessary:

Trying to find out the legal and regulatory position so you can even start to determine what type of project is possible is difficult. There is no government assistance on this, we've had to research it ourselves and reach out to other organisations. Everyone therefore does a bit of "reinventing the wheel" which is not productive, and if it is too difficult this acts as a barrier to the start of any project^{xxxvi}.

Craig Henderson from Mt Beauty made a similar case:

The current ad-hoc approach causes every community to have to start from a low base, in many cases reinvent things, and struggle to solve problems that other organisations have already overcome^{xxxvii}.

Similarly, **Totally Renewable Yackandandah** explained that current systems for peer-to-peer learning are largely informal, ineffective and time-consuming for those established groups that are often called on to provide support pro bono:

The current lean arrangements in network operators means that the flow of knowledge, skills and support from networks to community energy groups is at best ad hoc. There is little doubt there is remarkable expertise within networks, but that knowledge is typically unavailable to communities. It is our contention a more supporting relationship would allow community energy groups to be more effective in selecting constructive tasks, and doing so in ways that provided local benefit and network improvements^{xxxviii}.

The Opportunity

A range of models for a capacity-building structure were put forward but they broadly fell into three categories: mentoring, resource sharing, and centralised support functions.

Mentoring

Several submissions called for a **mentoring system**; whereby mature community energy groups can be supported to build capacity of newer groups. For instance, **Renewable Newstead** proposed that the Government should:

Encourage internships or scholarships where one or a few residents in one township or community get to go & stay in and work with a community energy group in another town or community to see how they tackle their barriers. Such internships could be short-term^{xxxix}.

Zero Emissions Noosa proposed a **partnership model** that would enable metropolitan communities and individuals to provide technical support or invest directly in regional community energy projects:

It would be worthwhile to examine ways to integrate partnerships between communities. For example, between metropolitan and regional communities. Metropolitan communities would be valuable sources of funding and expertise for regional communities. Whilst the regional community itself can host the community energy project, such an initiative has the broader benefit of increasing connections between Australians of all walks of life, and empowers all communities involved^{xl}.

Resource sharing

Some groups called for **regional networks** to enable community groups in the same area to share resources and collaborate. For instance, **GV Community Energy** called for “regional based community alliances to pool expertise and generate regional scale projects”^{xli}.

An example of such a network is the **North East Community Energy Network (NECEN)** in my electorate of Indi. NECEN was originally convened by the former Member for Indi, Cathy McGowan, in order to facilitate collaboration across groups. NECEN still meets regularly, and is convened by **Indigo Power**.

Similarly, the **Barwon Region Association for Community Energy (BRACE)** brings together 8 different groups:

BRACE is a network of community groups in the G21 region whose purpose is to facilitate co-operation and collaboration among its members to help support a wide range of local community energy initiatives^{xlii}.

Some submissions called for the NECEN-BRACE model to be replicated in other regions. **June Community Power Inc** proposed a sister network for the Riverina partnering with local Government and training institutions:

Networking, with the formation of regional community networks would greatly help in sharing knowledge, expertise and encouragement. The North Eastern Community Energy Network (NECEN) is an ideal model. A Riverina Community Energy Network could work alongside and be supported by Riverina Regional Development Australia (RDA), Riverina Eastern Regional Organisation of Councils (REROC), Charles Sturt University and NSW Department of Environment and Energy^{xliii}.

The **Coalition for Community Energy** has advocated for some time for these networks to be established nationally by working through existing networks in each state.

Centralised support functions

Some of the more mature community energy groups proposed a **centralised resource database** that would enable them to both contribute and benefit from data, templates, tools and case studies. For instance, **Geelong Sustainability** proposed:

Developing the community energy sector into a robust and highly skilled sector through communications and skill development initiatives, developing networks and knowledge sharing tools. Creation of a database and knowledge sharing tool to incorporate community energy training, mentoring and networking events programmes, identification of potential host sites^{xliv}.

For instance, **Augusta-Margaret River CCE** proposed a role for a dedicated Government agency to **commission research**:

There are now more than 100 community energy schemes in operation in Australia. It would be very valuable to collect data – successes, failures, economic and administrative structures – from them to guide policy. The Commonwealth Department of Energy might be commissioned to survey such organisations, especially members involved in the foundation of and the day to day running of their scheme. The objective would be to construct a broad picture of what works at what level of membership and financial commitment for Community Energy Associations, how and at what level they were originally financed and, if possible, what community members feel about the scheme^{xlv}.

There is also a role for **private companies in developing products** that could service this burgeoning sector. The **Frontier Impact Group** is working with the **Latrobe Community Power Hub** to develop a financial platform to allow private investment into community energy projects that could significantly reduce the cost of capital for hundreds of projects across Australia.

Many submissions called for the Government to play a role in centralising information and support into a **single, dedicated, community-centric agency**. One submission suggested a “centralised website communityenergy.gov.au where you can click through and tells you what your options are”^{xlvi} and another “a national, one-stop information portal for communities to investigate how they can establish a community energy project”^{xlvii}. **Sustainable Upper Ovens** called for a “national community energy support institution” to assist groups with start-up costs and technical support^{xlviii}.

Tersum Energy in Western Australia called for the establishment of a **national body** that would focus on connecting community energy groups with capital and educating communities on preparing business cases, as well as representing the interests of the community energy sector in national policy discussions alongside other sector-wide organisations such as the Australian Energy Council, the Clean Energy Council and Electricity Networks Australia.

Opportunity 4: Introduce a public underwriting scheme to de-risk mid-scale projects

What we heard

Many groups had looked into developing mid-scale community-owned generation or storage projects but found that they were not financially viable because the benefits of locally generated and consumed electricity are not compensated in the current market structure.

Community-scale generation and storage provide several benefits to the grid that are not currently priced in. In their submission, the **Energy Transition Hub** at the University of Melbourne explains how the benefits of mid-scale community energy are not being appropriately captured:

Waiting for the implementation of NEM reforms to allow energy resources from the local community and consumers to bid into and receive payments for energy and demand flexibility. This includes reforms and trials in the wholesale energy market (5-min settlement, wholesale demand response, locational marginal prices) and networks (open energy networks, distributed energy integrations). The time waiting for these reforms to be implemented delays the opportunity for greater community participation^{xlix}.

Perhaps the largest barrier here is locational marginal pricing. Locational marginal pricing is essentially the idea that we should reward people for building new energy generation and storage in the physical locations where it is best to do so. As the **Energy Transition Hub** notes:

Market mechanisms in the NEM have traditionally centred around utility-scale generation and poles-and-wires solutions over locally oriented solutions, thus creating challenges for communities wanting to invest in their own energy resources and for their own local energy needs^l.

Moreover, mid-scale generation and storage projects have the advantage of not requiring expensive upgrades to the grid transmission network. Mid-scale projects aimed at local consumption increase the utilisation of the low-voltage distribution network. Conversely, many large-scale renewable projects are being delayed, in some cases by several years, due to congestion on the high-voltage transmission network.

However, since medium-scale projects face many of the same fixed costs as large-scale projects, they will naturally come at a premium.

Finally, our network tariff structure means local generation currently acts as cross-subsidy for large-scale generation. The costs of using the electricity distribution and transmission network are shared across electricity consumers volumetrically, that is, they are charged to consumers based on how much electricity they consume from the grid.

This means if you live in Wangaratta and you consume electricity generated nearby at Goorambat, even though you only use a tiny part of the grid, you get charged at the same network rates as if you were consuming electricity from North Queensland or South Australia.

The **Coalition for Community Energy** believes that the network tariff structure is preventing a wave of investment in mid-scale community-owned energy generation:

Our members are wanting to build, own and operate mid-scale projects and like large developers, they need price certainty to deliver. There is a market barrier in the pricing

of electricity infrastructure that fails to unlock the savings of locating energy supply near demand. There are no incentives for the market to unlock public benefits such as improved community resilience and local jobsⁱⁱ.

The **Latrobe Community Power Hub** made the same point in their submission:

Many community projects such as solar gardens, microgrids and other small-scale solar farms fail to make project closure as they are not viable due to the impost of the network chargesⁱⁱⁱ.

This network charging also means community batteries are disincentivised from storing excess electricity produced during the day. Research conducted at the Australian National University led by **Dr Marnie Shaw** (a member of our Expert Panel) explains that:

Current network tariffs disincentivise [battery] charging/discharging from locally generated solar energy and selling energy to customers locally. This is because, when the battery is operated in front-of-the-meter, network tariffs are charged on both energy transport into and out of battery . This creates a financial disincentive to charge and discharge locallyⁱⁱⁱⁱ.

In sum, there are a great many benefits to mid-scale energy generation, storage and consumption that the market regulation is failing to price in. As a result, these community-scale projects operate as effective subsidies to the rest of the network and therefore fail to demonstrate viable business case.

The Opportunity

In our co-design process, we canvassed four different policy mechanisms to provide a financial incentive for community-scale energy projects:

- **Feed-in tariff** involving a payment made to an electricity generator for the electricity they produce.
- **Government underwriting** whereby the Government accepts liability for losses, which in effect guarantees an electricity generator a certain return
- **Community energy target** whereby the existing Renewable Energy Target could be extended and reformed to require a certain level of community-owned energy
- **Reverse auctions** whereby the Climate Solutions Fund could be reformed to enable community energy projects to receive carbon credits to sell on the carbon market

Whilst we found significant support for some form of financial incentive, the sector does not appear to have a strict preference for any particular mechanism over any other.

For instance, rather than nominating a specific mechanism the **Mitchell Community Energy Group** stated:

We urge financial support for community energy programs, particularly for the mid-scale projects that are locally very difficult to finance from local sources. These projects not only provide economic and environmental benefits but invariably make major contribution to local community development and pride^{iv}.

In the past, the **Coalition for Community Energy** has argued for a feed-in tariff for mid-scale community energy projects of 6-7c above wholesale rates. But in their co-design submission,

C4CE made a more flexible call for *any* financial mechanism that meets specific criteria to ensure it incentivises investment in community energy. They outlined that such a mechanism should be available only to projects that^{lv}:

- Are community-led models or co-investment models with broad local support;
- Involve at least 20% equity from local people and 50% equity by local organisations;
- Are medium-scale projects (between 1-10MW);
- Involve local control and decision-making, local benefits, and which use local skills.

Many groups specifically endorsed the proposal from the C4CE including **Totally Renewable Beechworth** and the **Frontier Impact Group**. The **Goulburn Broken Greenhouse Alliance** argued that such a mechanism would “recognise the grid development savings and the value of non-commercial benefits of community energy assets”^{lvi}.

Meanwhile, other submissions called for specific mechanisms. The **Surf Coast Energy Group** called for a feed-in tariff, the **Manilla Renewable Energy Group** a regulated floor price, while **Enova** in Byron Bay noted that government underwriting or reverse auctions “appear to be the most feasible and easiest to implement without excessive regulation”^{lvii}.

In evaluating the different proposed mechanisms, we considered three criteria:

1. **Effectiveness:** Their ability to unlock investment in community-scale energy projects;
2. **Support:** The extent of community support for a specific mechanism;
3. **Feasibility:** The ability to implement a specific mechanism within existing policy settings.

Based on this third criterion, the view of the Expert Panel is that government underwriting represents the most attractive option for implementing a community energy financial incentive. This is because the Government has an existing framework for underwriting energy sector investments: the Underwriting New Generation Investments (UNGI) scheme.

The UNGI scheme announced in 2018, involves the Government entering into contracts with energy investors to de-risk investments in “firmed” generation. The precise mechanism of underwriting has not yet been announced, however the UNGI scheme demonstrates a willingness on the part of the Government to accept risk in order to stimulate private sector investment in energy generation due its many co-benefits that are not currently priced in appropriately.

Opportunity 5: Enable community co-investment in large-scale projects

What we heard

The co-design process identified that enabling regional communities to co-invest in large-scale commercial renewable developments was a key priority.

In many cases, community energy groups argued that they were interested in partnering with commercial developers through co-investment, but that there was little reciprocal interest. For instance, **Renewable Albury-Wodonga** argued that significant interest for co-investment in Albury-Wodonga is not being catered for:

There is a great desire from many people in the community to invest in medium to large scale renewable energy projects. As it currently stands the vast majority of scale sized renewable projects are foreign owned, with little to no ongoing benefit by way of jobs or local investment being granted to the communities on an ongoing basis after installation^{lviii}.

Community co-investment is seen as a safeguard mechanism to ensure that commercial developers are required to involve the community more broadly in projects. **Totally Renewable Yackandandah**

Although TRY has not yet participated in a large-scale development, yet we have observed the difficulties that other communities have had. The role for developers to invest in communities is under-recognised, and when it does happen it is often done to the community, rather than with them^{lix}.

Similarly, the **Surf Coast Energy Group** argued that co-investment models could drive more community-centric energy development more generally:

Rather than large-scale developments that are 100% owned by distant companies and shareholders, we support developments that respect local preferences, facilitate local ownership and deliver local benefits^{lx}.

The **Australia Institute** argued that co-investment schemes represent a win-win, bringing together the technical expertise of commercial developers with the community buy-in of co-ownership:

By selling a percentage share to a community-owned energy company the commercial developer generates community buy-in. Co-ownership is the easiest way for local communities to invest in large-scale solar and wind projects. Wind projects present significant complexity around project management, electricity network and markets, capital raising and permitting issues and are unlikely to proceed without co-ownership or government support^{lxi}.

The **Clean Energy Council** argued that co-investment in large-scale projects is often the optimal benefits-sharing model to overcome complex technical barriers whilst retaining significant community involvement and benefit:

A number of barriers such as access to start up and project capital, navigating the planning and environmental systems, and licensing restrictions - could also be lowered for community groups by working in partnership with specialist private sector proponents.

These proponents can bring the expertise, and are likely to be better placed to secure the significant project finance required to deliver the project, while ensuring that it retains a strong focus on great community outcomes.

A number of our members are incorporating more sophisticated benefit sharing models into their projects. This enables communities to benefit from a privately developed and operated project, that nevertheless delivers substantial community benefits^{lxii}.

The evidence suggests that compared to purely commercial developments, community co-investment models are more profitable, receive planning approvals faster, receive more community support and deliver higher benefits to local communities.

For instance, **WestWind Energy** argues that community co-investment models ensure that the “commercial developer benefits by gaining community support and a social licence to operate...and aid the project’s profitability”^{lxiii}.

However, researchers from the **Energy Transition Hub** noted that co-investment models may be limited by the proportion of community ownership involved:

Co-investment with a renewable energy developer and its financial backers can be an attractive option for communities with limited time, expertise and capital. These barriers can be overcome by passing a greater share of project management responsibility and investment risk to commercial partners. However, there is a trade-off that should be acknowledged: the more capital non-local partners invest in a project, the less control local partners are likely to have. In co-investment partnerships for large-scale renewable energy projects that cost tens or hundreds of millions of dollars, community members are likely to be minority owners and therefore lack sufficient voting rights to carry decisions^{lxiv}.

The Opportunity

Broadly speaking, there are two models to drive uptake in large-scale community co-investment: opt-in versus universal access models.

Opt-in model

In an opt-in model, large-scale developers would be encouraged to engage with communities and to offer equity investments, but there would be no actual requirement to do so. There are several examples of Australian developers voluntarily and successfully offering community co-investment models:

- The proposed 1 GW **Golden Plains Wind Farm** near Geelong, being developed by *WestWind*, is slated to be the largest in the South Hemisphere. The \$1.7 billion project will be part-financed by investments from communities living within 10km of the wind farm^{lxv}.
- The 270 MW **Sapphire Wind Farm** in New England, NSW, developed by *CWP Renewables*, offered Australia’s first community co-investment model into a large-scale windfarm. The developer allowed the New England community to make investments starting at \$1250 into the wind farm, raising \$7.4m to finance the project and delivering a 6% return to local community shareholders^{lxvi}.

- The 20 MW **Coonoor Bridge Wind Farm** near Bendigo, developed by *Windlab*, awarded every household within 3.5km of the project a small equity share and the opportunity to invest further. Overall, 33 local households purchased around 3.7% equity in the \$50 million project, receiving a return for the next 25 years^{lxvii}.

However, many groups argued that currently, many large-scale developers do not engage local communities to the extent desired, and overall, the vast majority of renewable energy development in Australia occurs without community co-investment.

Universal access model

Under a universal access model, any individual or community would be given the opportunity to invest in new renewable energy developments being developed in their area. Developers of renewable energy projects above a given size (say, 10 MW) would be required to offer a certain proportion of the equity in a project to the local community.

This type of model is well-established overseas. Since 2008, Denmark has required developers of large-scale wind projects to offer shares representing 20% of the total equity of a project, at cost-price, first to residents within 4.5km of the project and then to residents of the local municipality^{lxviii}.

As a result, over half of the entire wind capacity of Denmark has a community-ownership model^{lxix} and around 20% of the total capacity is directly owned by citizens, local landholders and farmers^{lxx}. More broadly, in 2018, the European Union issued the Renewable Energy Directive requiring all Member States to pass legislation by June 2021 that would enable the development of 'renewable energy communities' including co-investment models.

Co-investment models were explicitly called for by groups such as **Totally Renewable Yackandandah**, **GV Community Energy** and **Solar Citizens**. **Renewable Albury Wodonga** supported the Danish model, saying:

There needs to be a requirement built into legislation that a portion of any development above a certain size have Australian ownership and a heavy recommendation of community ownership of these developments^{lxxi}.

Critically, under the universal access model, if the local community decides not to invest, the commercial developer is able to proceed with full equity. This is critical because in many cases, co-investment is not what local communities are calling for. In their submission, Neoen detailed the process for delivering a community-led solar farm at Goorambat. They outlined how the local community preferred to share in the benefits of the project through leaseholder payments, local employment, a community enhancement fund, and a new mobile phone tower, rather than co-investment.

The inherent flexibility of the universal access model, therefore, is that it maximises the options available to local communities and their ability to benefit from new projects.

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Appendix 2 : Opportunities to Accelerate - The Local Power Plan

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