



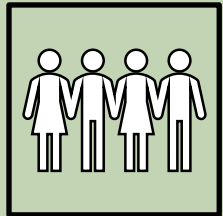
# COMMUNITY ENERGY

*for Venus Bay?  
...and Tarwin Lower*

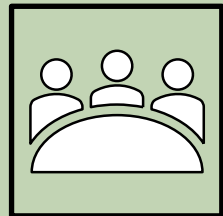
*Exploring energy and  
value flows and ways  
of organising to inform  
our Community  
Energy Plan*

Harvest Report #4 – July 2023

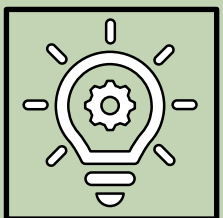
# Summary of Workshop #4 – Applying Community Wealth Building to our community energy



35 people participated this 4-hour workshop – with some new people but many following on from Workshop #3 and representing a range of businesses, community groups, part-time and full-time residents.



We began as usual with a recap on the origins of our Community Energy Initiative and what we have achieved so far through three workshops, four market stalls, many small meetings and collaboration with community and energy partners

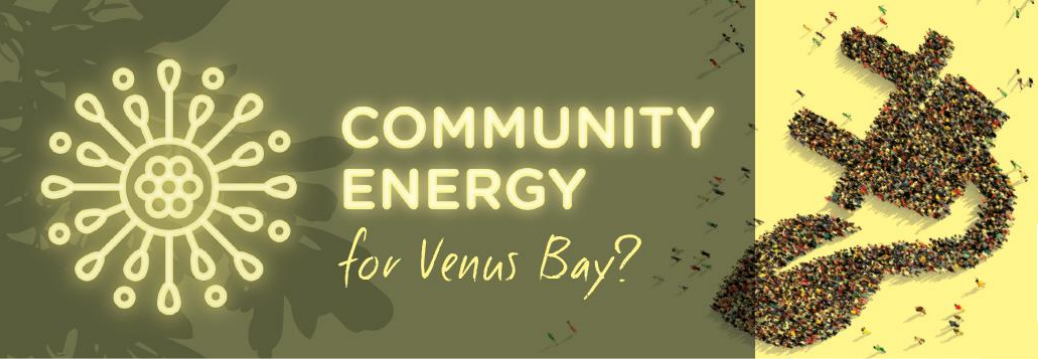


We then dived into the substance of this workshop #4 – community wealth building and how to adopt this approach and its principles in the organising and partnering we will need to realise our Community Energy Plan.



The community values guiding discussions and decisions about this renewable energy initiative continue to be a strength of this community-led and co-designed feasibility study. Excitement about Community Wealth Building is growing steadily. The Community Plan is now being drafted and due for presentation as a working draft back to the community in August.

# Workshop #4 followed this sequence of activities



Time	Item
12 to 12:05pm	Welcome and Acknowledgment.
12.05 – 12.15	The story so far..... And outcomes from this workshop
12.15 – 12.40	Energy and economic values and flows + Q&A
12.40 – 12.50	Community wealth building recap
12.50	Lunch
1.20 – 1.35	Community energy case studies
1.35 to 2.35	Activity #1 and reporting back
2.35 to 2.55	How might we organise to get going?
2.55 to 3.45	Activity #2 and reporting back
3.45 – 4pm	Wrap up, next steps, wine and cheese

An aerial photograph of a coastal landscape. In the top left, a bright blue beach curves along the edge of a turquoise sea. The rest of the image is dominated by lush green fields and a complex network of waterways, including a large river delta in the upper right. The text 'Recap on the story so far....' is centered in white, with a white wavy underline below it.

Recap on the story  
so far....

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# Thinking back.....

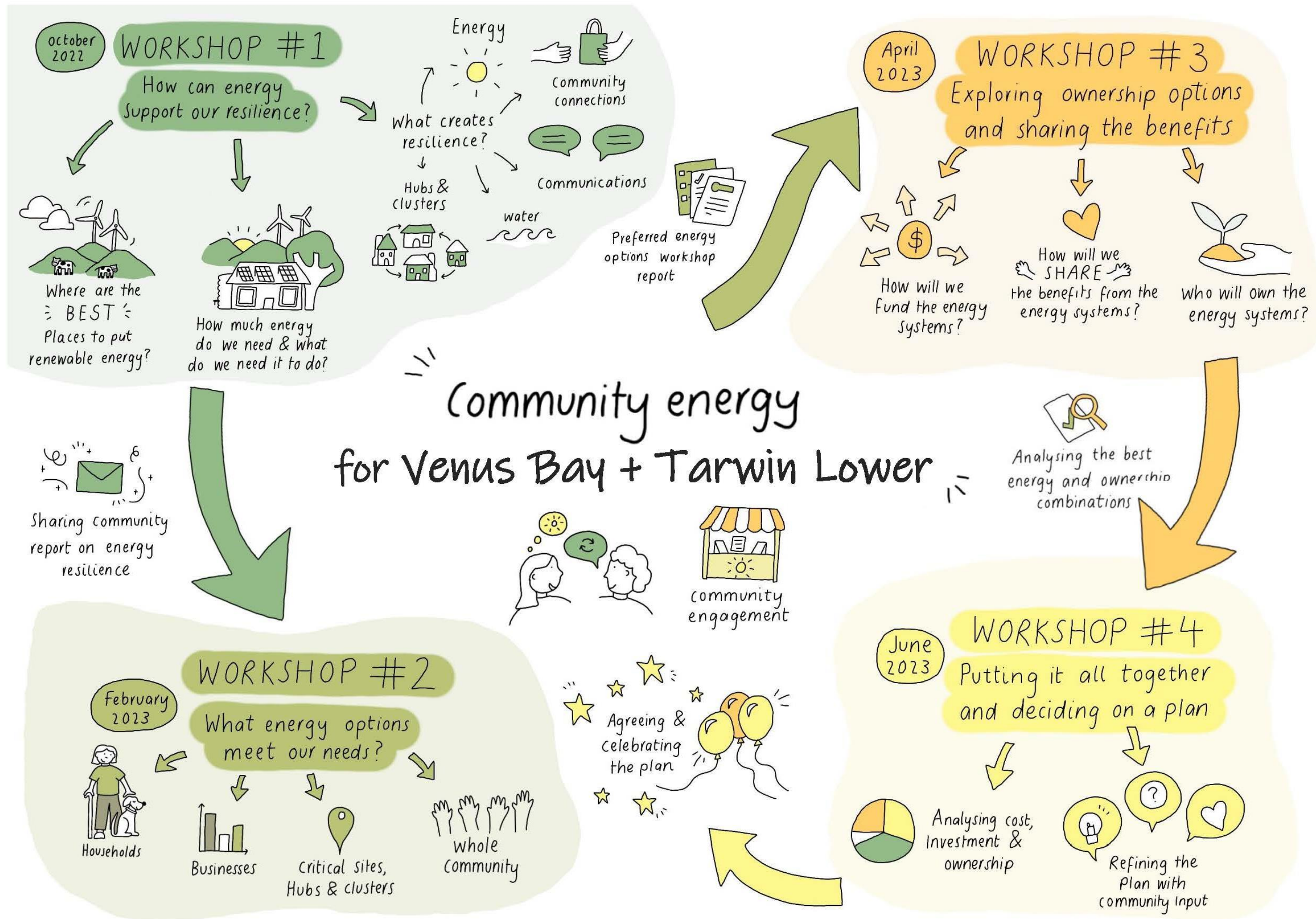
A discussions about community connectedness, vulnerabilities and resilience and meeting essential, enough and everything energy needs were our main focus at Workshop #1, back in October 2022.

Then, we had to pivot from our original workshops plan because of delays in receiving energy data needed for options analysis.

So, at Workshop #2 we shifted our focus to discussing community values and how they need to be applied to the energy options that could meet our essential, enough and everything energy needs, that we were exploring.

The team received and analysed these energy data and presented some of the findings at Workshop #3, including five pathways we might take for realising the most promising energy options.

This enabled a focus at Workshop #4 of how we might organise to deliver the five pathways, including working with existing organisations, partnerships and possible new entities.



POSSIBLE VALUES & CRITERIA

# RELIABILITY

Important for Medical equipment  
Food safety

critical  
Must work

# SAFETY

Individuals → community  
Emergency Services  
CFA

# EQUITY

Support EVERYONE in the COMMUNITY  
Community vision

# INNOVATION

System needs to be able to be updated  
Equity models  
Leading the way

# COMMUNITY ENERGY FOR VENUS BAY + TARWIN LOWER

ACTIVITY #1

Safety of System

# SELF-SUFFICIENCY

connected to reliability  
Sustainability  
effective costing  
GOAL = Microgrid  
Safety personal → community  
Convince government of economic benefit

# COST

keep domestic bills down  
Generate excess energy & sell for income  
Fair for usage  
Adaptable system  
Scale up & add on options  
Community energy storage

# SUSTAINABILITY

Environmentally friendly  
Renewable energy  
role modelling

# PEACE & TRANQUILITY

location of equipment  
Protection of place

These Community values were first discussed at Workshop #2 and further developed at Workshop #3.

They were shared with the wider community at the Tarwin Lower Markets and through an online survey. Then they were further tested at Workshop #3 and #4.

Feedback through these channels helped further define and refine our understanding of these values from the perspective of people who live and work in Venus Bay and Tarwin Lower and as they relate to a local transition to renewable energy.

These values continue to strongly guide the feasibility study and the drafting of the Community Plan.

They are a stand-out strength of this community-led initiative.



# RECAP

Hourly energy needs for the whole community = 2.5 MW

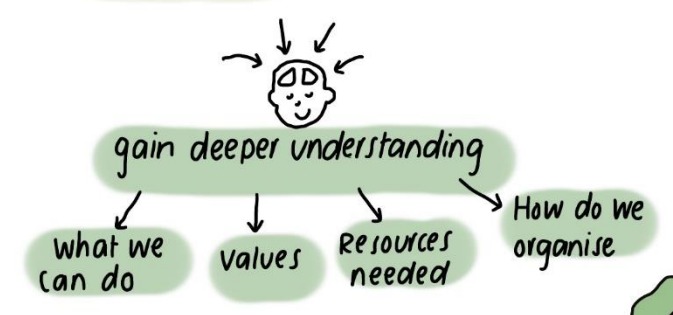
- Top 3 pathways:
- Households **BIGGEST** users
  - Community
  - Businesses

Solar on rooftops is **MOST EFFECTIVE**

Reduce bills

Invest in community

- Workshop #1**
  - Resilience & Community connection
- Workshop #2**
  - Introduction to energy options
  - Values
- Workshop #3**
  - 5 energy pathways
  - House holds & community facilities
- Workshop #4**
  - Today!
  - Ethical fields
  - community wealth building
- Workshop #5**
  - NEXT!



Generates energy when the sun shines

Tourists vs. Part timers

**FLEXIBLE** Energy use

Match load to generation

change time of use

Do **MORE** with Less

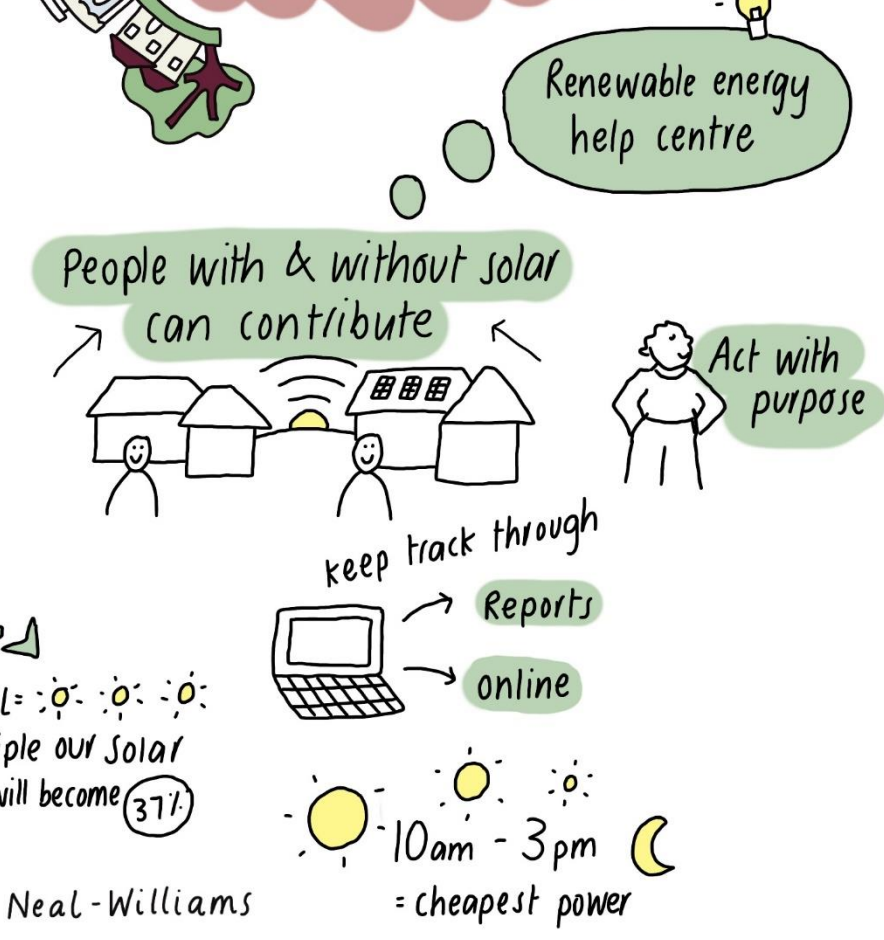
**24% of energy = RENEWABLES** (NOW)

GOAL = Triple our Solar will become **37%**

# COMMUNITY WEALTH BUILDING



# COMMUNITY ENERGY FOR VENUS BAY + TARWIN LOWER



## CASE STUDY

### YACKANDANDAH

Invest in community

petrol station = important asset

Population = 2000

wide spread ownership

## CASE STUDY

### SOUTHERN CORE FUND

Communities offered interest free loan

Partnership with parks vic

revolving fund

strong partnerships

## CASE STUDY

### Z-NET URALLA

Energy efficiency improvements

Advocacy & workshops

Physical offices

Solar on buildings being rented

online home assessment

## CASE STUDY

### GEELONG SUSTAINABILITY

local people invest

80% grant funded

Hire 7 people locally generated solar

Education programs

Effective tender process

solar on 8 community facilities

## CASE STUDY

### THE PEOPLES GRID

Enabler for communities

Aggregator

virtual power grid

Communities sign up

creates a platform/marketplace

excess solar

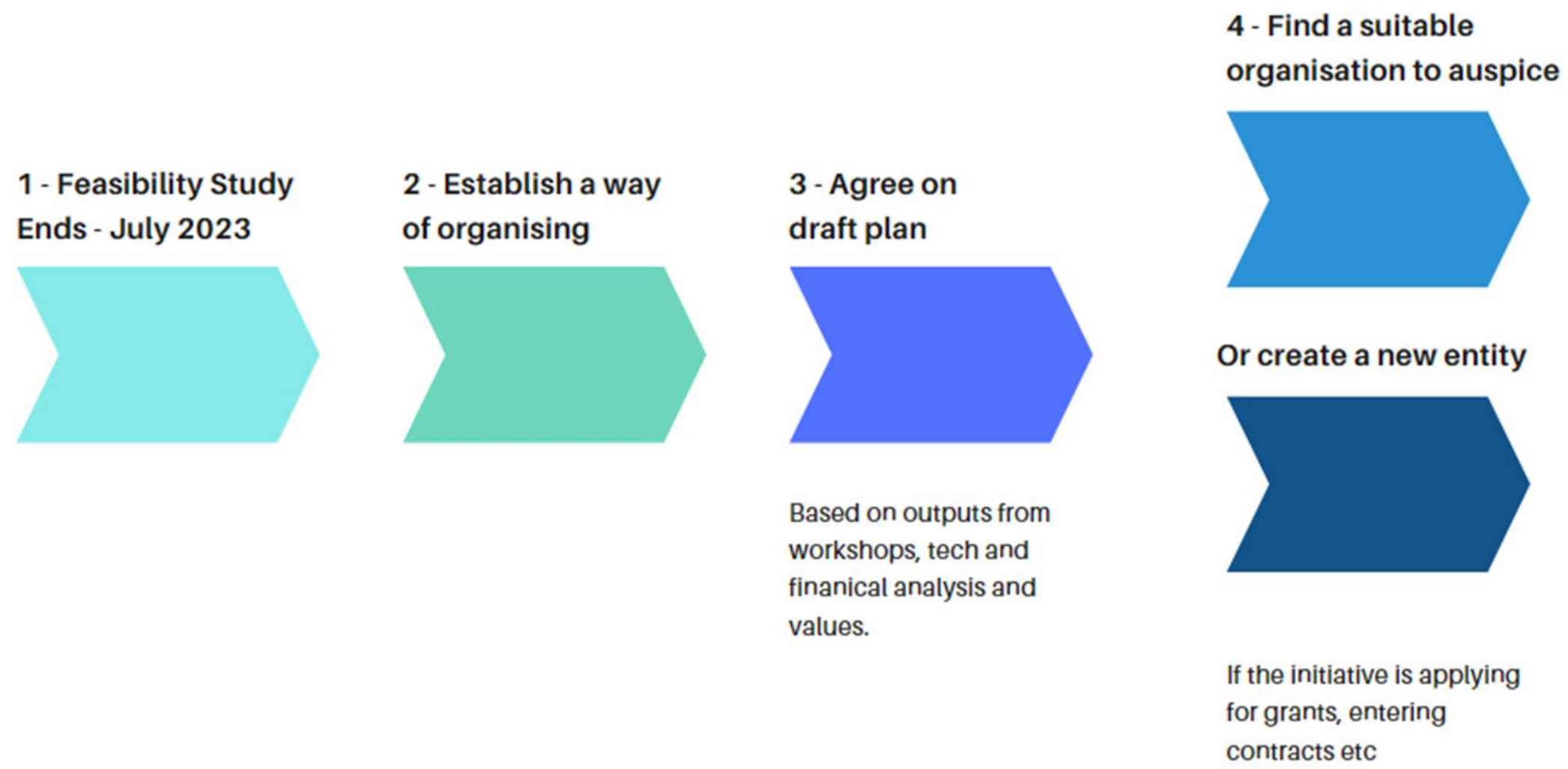
people purchase

This graphic illustrates the recap given at Workshop #4, covering the main elements of our Community Energy Initiative up until June 2023

# Given we are nearing then end of the Feasibility Study, the outcomes being sought from Workshop #4 were:



**June 2023: Where we are at in the study and what steps we need to take next.  
The two options at Step 4 can be undertaken concurrently.**



## **Outcomes sought from Workshop #4:**

1. Continued support and understanding of the value and potential of the initiative for local people and our community
2. A deeper understanding of what we can do and what resources are needed
3. Identify what makes sense as first step activities to inform the basis of a community action plan.
4. How can we organise? What governance is needed to ensure decisions are in line with community values and what partnerships could be utilised?
5. How might individuals contribute in small ways – every little bit helps.



At Workshop #4 we focused on energy pathways 1, 2 & 3 as a way of discussing and drawing out the immediate next steps we could take in each pathway and for exploring types of entities or partnerships that would best suit our values, energy options and enable the pathways.

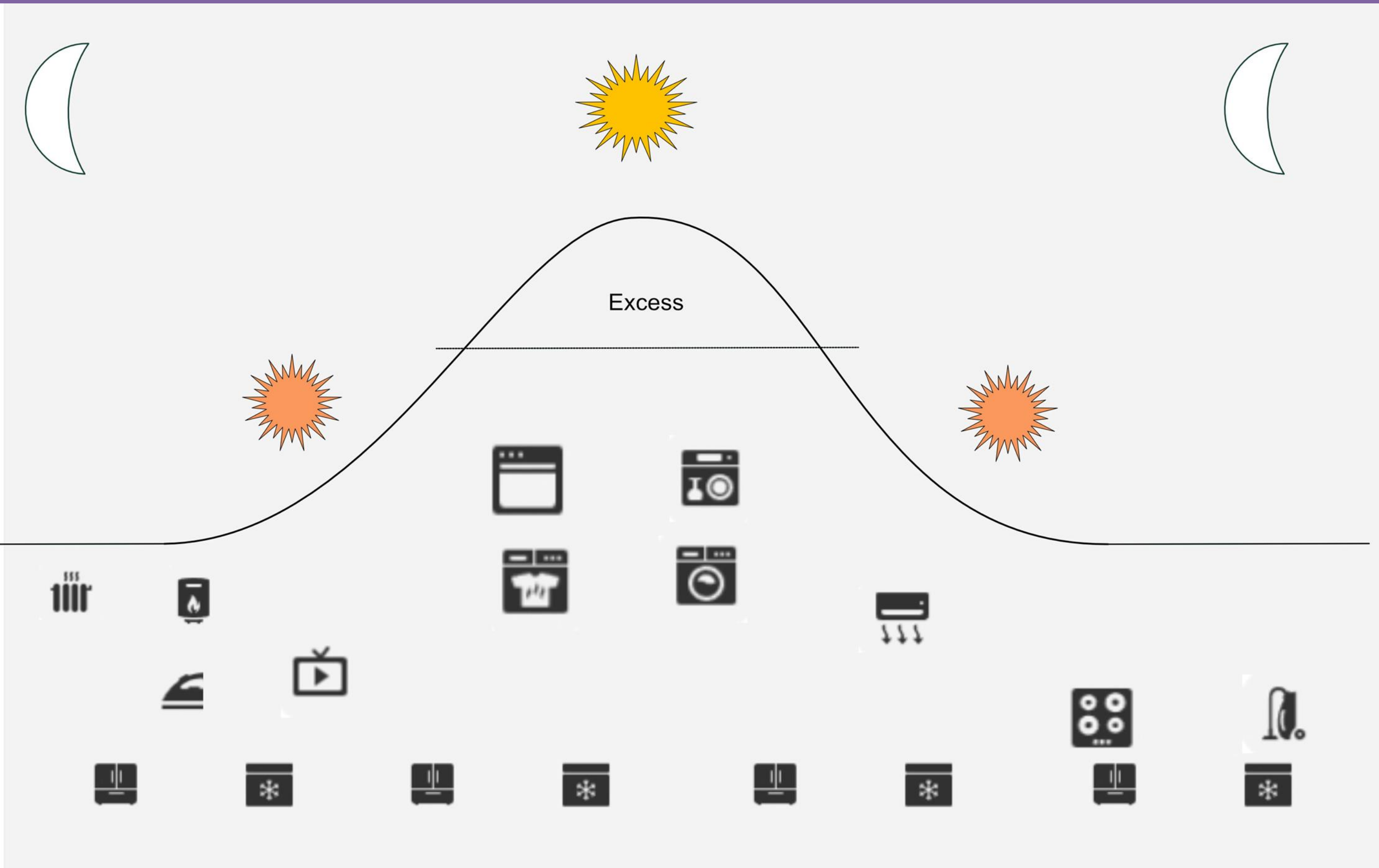
PATHWAYS		Core contribution		Secondary contribution	
Workshop Focus was on Pathways 1,2,3	PATHWAY 1	HOUSEHOLDS	Sustainability	Self Sufficiency	
	PATHWAY 2	COMMUNITY	Safety	Reliability	
	PATHWAY 3	BUSINESSES	Safety	Sustainability	
	PATHWAY 4	Small Clusters (STORAGE / WIND)	Reliability	Safety	
	PATHWAY 5	Whole Community	Safety	Reliability	

The five energy pathways provide focused, manageable ways for us to pursue energy options and deliver on our community values. The pathways provide opportunities for many people to work together on what most interests them or best meets the needs of households, community groups, businesses, small clusters or whole of community.



This table shows core and secondary contributions to our values through each pathway. Reducing energy costs and increasing renewable energy requires a focus on where energy is used. This highlights the importance of starting with households because that is where the major part of energy use and expenditure occurs. Our 'How we are connected' map from Workshop #1 showed the most important starting pathway for ensuring safety and reliability and enhancing community resilience would be energy systems on community facilities. Businesses are important too as they deliver some of our essential services – e.g., access to petrol and food. And, heading along the track of implementing the household, community facilities and business pathways will inform what we might do for the small clusters and whole community pathways.

# When thinking about designing and funding energy efficiency and renewable energy options, we need to consider how we might use energy flexibly, how we might store energy, and how we might shift to electrifying as much as we can whilst sustaining our resilience



Using energy flexibly can better help us match our energy use to times when we have surplus solar, for example timing our clothes and dish washing for the middle of the day.

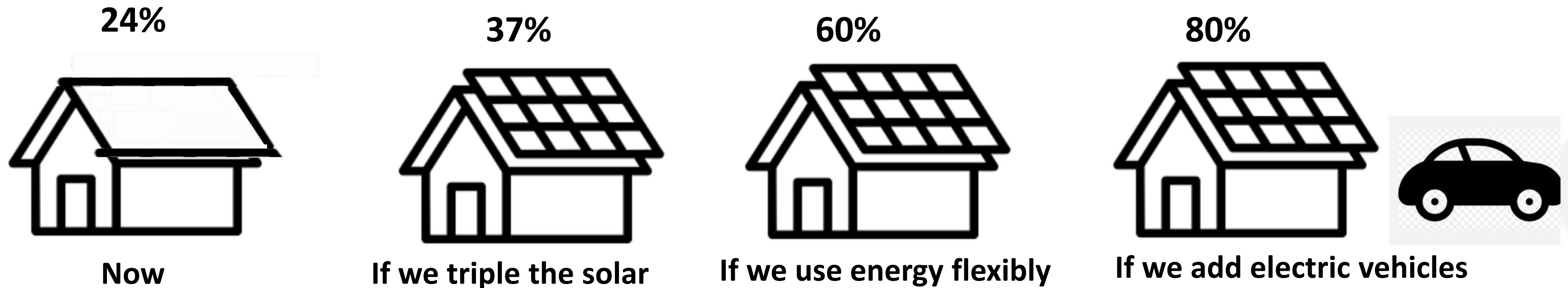
Getting the sizing of our energy systems right is also important, so we are not producing too much excess energy, which will end up going on to the grid and leaving our community.

Storing energy when we have surplus is also a good option, for example, setting your hot water service for heating during the middle of the day or, installing batteries where this is affordable.

When appliances need replacing, it could also be timely to switch to electric options, which are mostly cheaper to run in the country where reliance on bottle gas is high. For example, hot water and space heating. Bulk purchasing and installation of appliances across the community can be another way to bring down prices.

Changing our energy use makes significant contributions to sustainability and costs. Doing as much as possible in the areas of energy efficiency and using energy flexibly will help reduce the size and cost of energy systems we install at all scales – individual sites, clusters and whole community.

## % Renewable energy use possible in Venus Bay and Tarwin Lower.....



### Explanation of these figures.

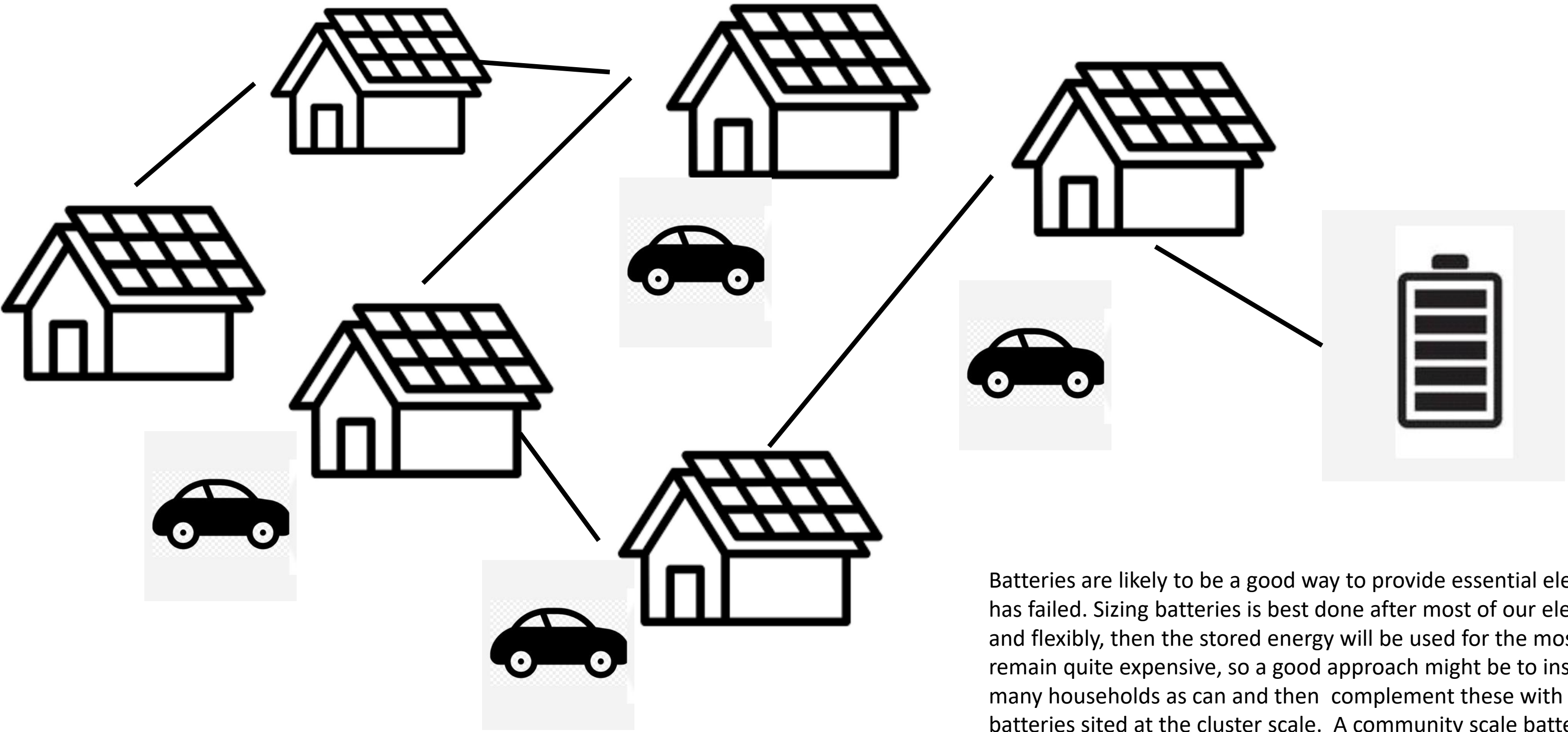
Currently, 24% of electricity use in Venus Bay and Tarwin Lower is provided by local rooftop solar. Roughly half is used by the solar owners and half is used by their neighbours, who don't have solar. For a short period on sunny days in November, the community produces more solar than it uses, which is exported to the grid back toward Inverloch. And the average household energy bill is over \$2,000 per year if we also take into account LPG and wood bills.

Next, we could increase locally produced renewable energy to 37% by tripling the amount of rooftop solar. This would mean most homes have solar and quite a lot of the solar produced will be exported or wasted, because Ausnet will likely put limits on how much can be exported. Rooftop solar is still a cost-effective investment in most cases and saves each solar owner money.

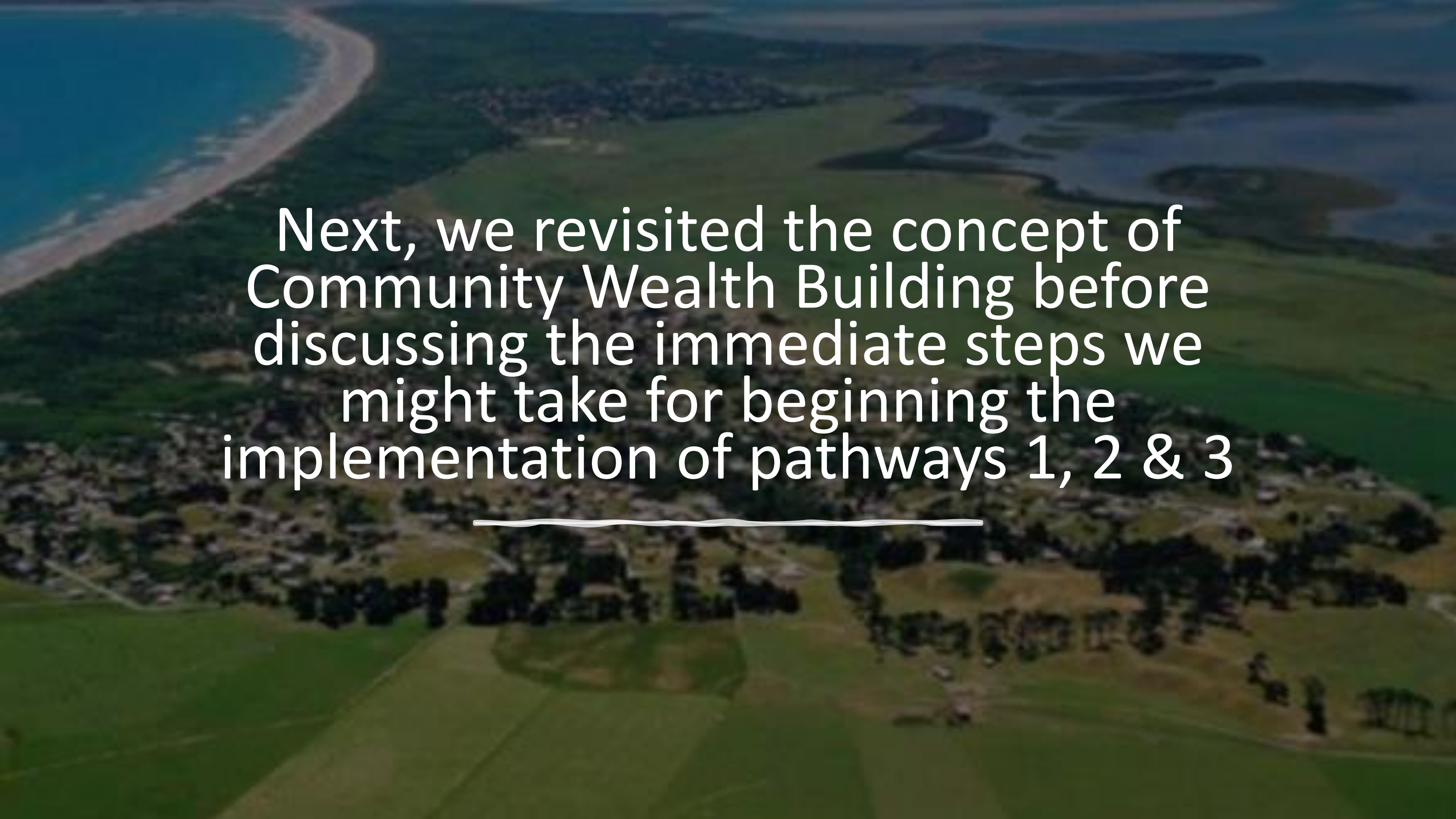
Then, the real savings come when we use solar energy that would have otherwise been exported or wasted. We could increase the use of locally produced energy to around 60% and reduce the average household energy bill to \$640 per year, if we replaced LPG hot water with efficient heat pumps, replaced LPG cooking with induction cooking, used reverse cycle air conditioning for heating and used energy in the middle of the day whenever we can - especially for hot water.

Ultimately, we could reach 80% self-sufficiency with efficient homes and businesses, and flexible use of all energy to make the most of local renewable energy, followed by other renewable sources such as wind energy. This would include converting all our transport needs to renewable electricity as well. We could keep installing solar as more electric vehicles (and bikes and scooters) become part of our daily lives (and electricity use).

As we make progress with the households, businesses and community facilities pathways, we can make connections between these sites and design systems that support small clusters and eventually whole of community.



Batteries are likely to be a good way to provide essential electricity when the main grid has failed. Sizing batteries is best done after most of our electricity can be used efficiently and flexibly, then the stored energy will be used for the most important tasks. Batteries remain quite expensive, so a good approach might be to install small sized batteries in as many households as can and then complement these with shared neighbourhood batteries sited at the cluster scale. A community scale battery may or may not be needed but investigating this makes sense in a few years' time, once the household, community facility and business pathways are up and running.

An aerial photograph of a coastal landscape. In the top left, a sandy beach meets a clear, turquoise ocean. The middle ground is dominated by a large, dark green field, possibly a golf course or park, with several clusters of trees. To the right, a large, calm body of water, likely a bay or lagoon, is visible. The bottom of the image shows more green fields and some distant structures.

Next, we revisited the concept of Community Wealth Building before discussing the immediate steps we might take for beginning the implementation of pathways 1, 2 & 3

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# Community Wealth Building

is an economic development approach that seeks to....

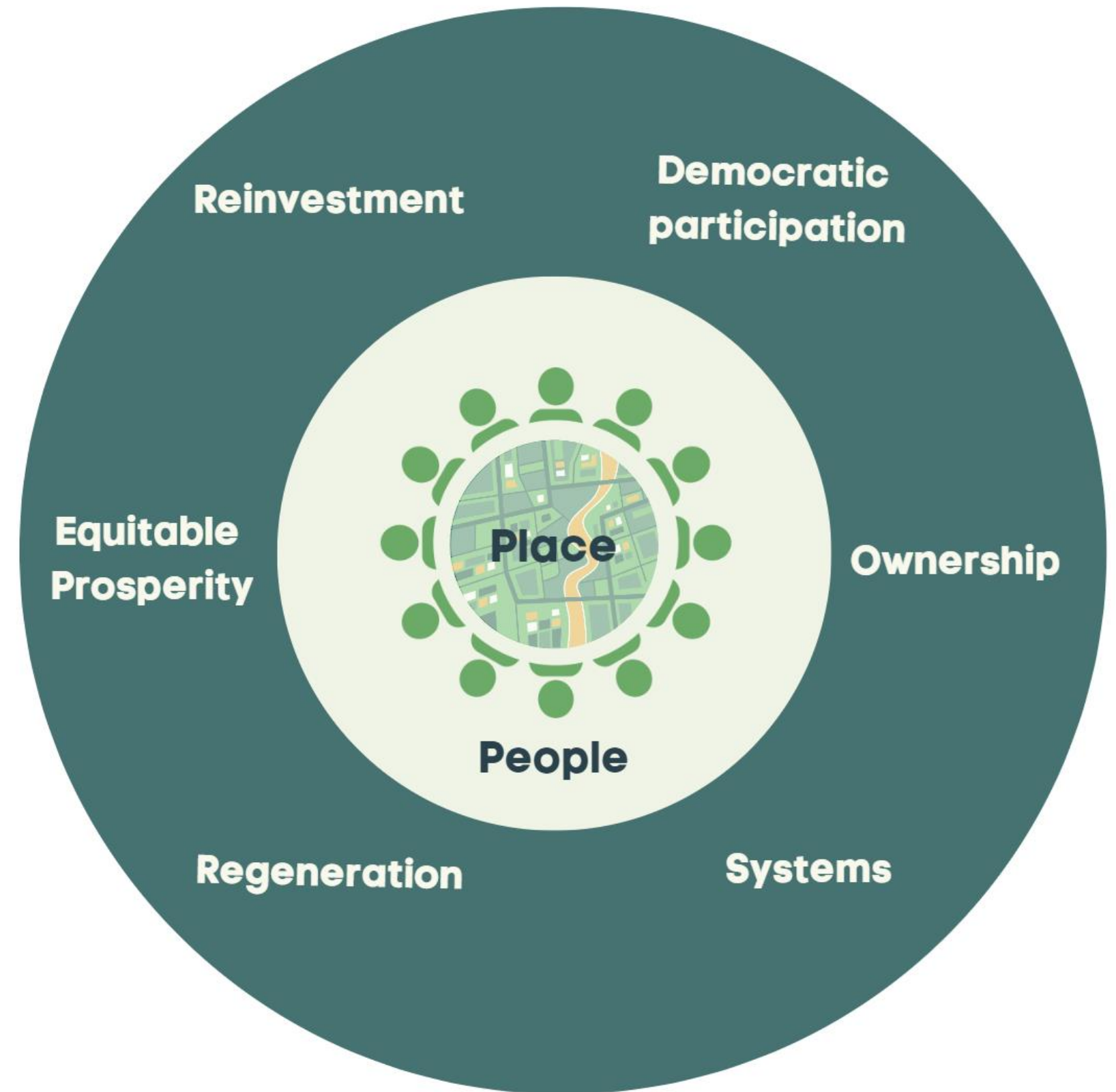
Localise economies

Place ownership, control and benefits into the hands of local people

Create economies that genuinely work for all and the environment

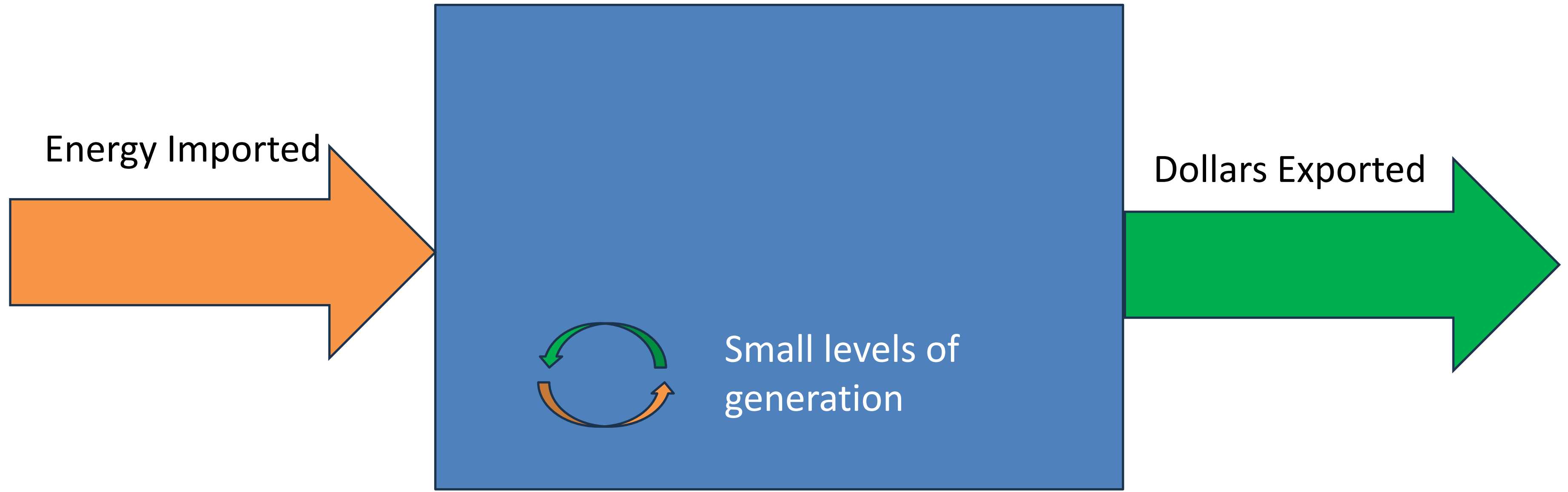
# Community Wealth Building

is based on a common set of principles of how to structure and operate our local economies...



When thinking about applying Community Wealth Building, it's useful to think about the money flows associated with energy. Energy comes into the community and the money spent on energy leaves the community, apart from the small amount of solar currently generated.

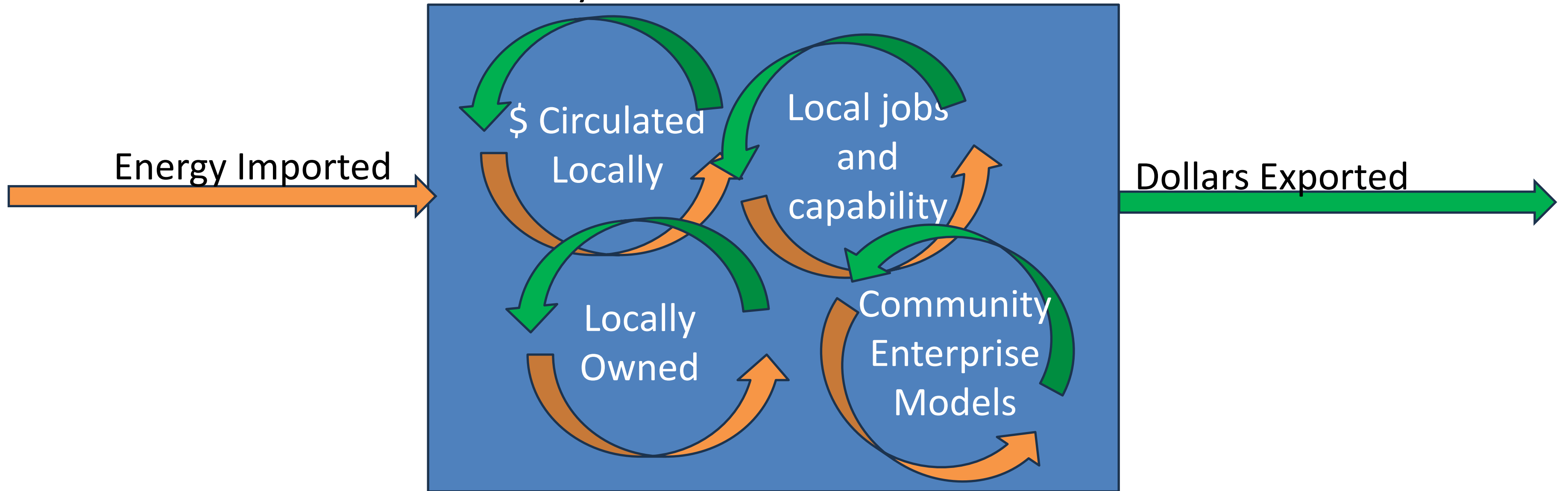
### Venus Bay and Tarwin Lower Communities





Implementing energy efficiency, flexible use of energy and rooftop solar and batteries, could help capture more of the economy locally, because less energy is imported from outside the community and so less money leaves the community. With more money circulating within the community existing, local businesses and jobs and future enterprise will be more sustainable and viable.

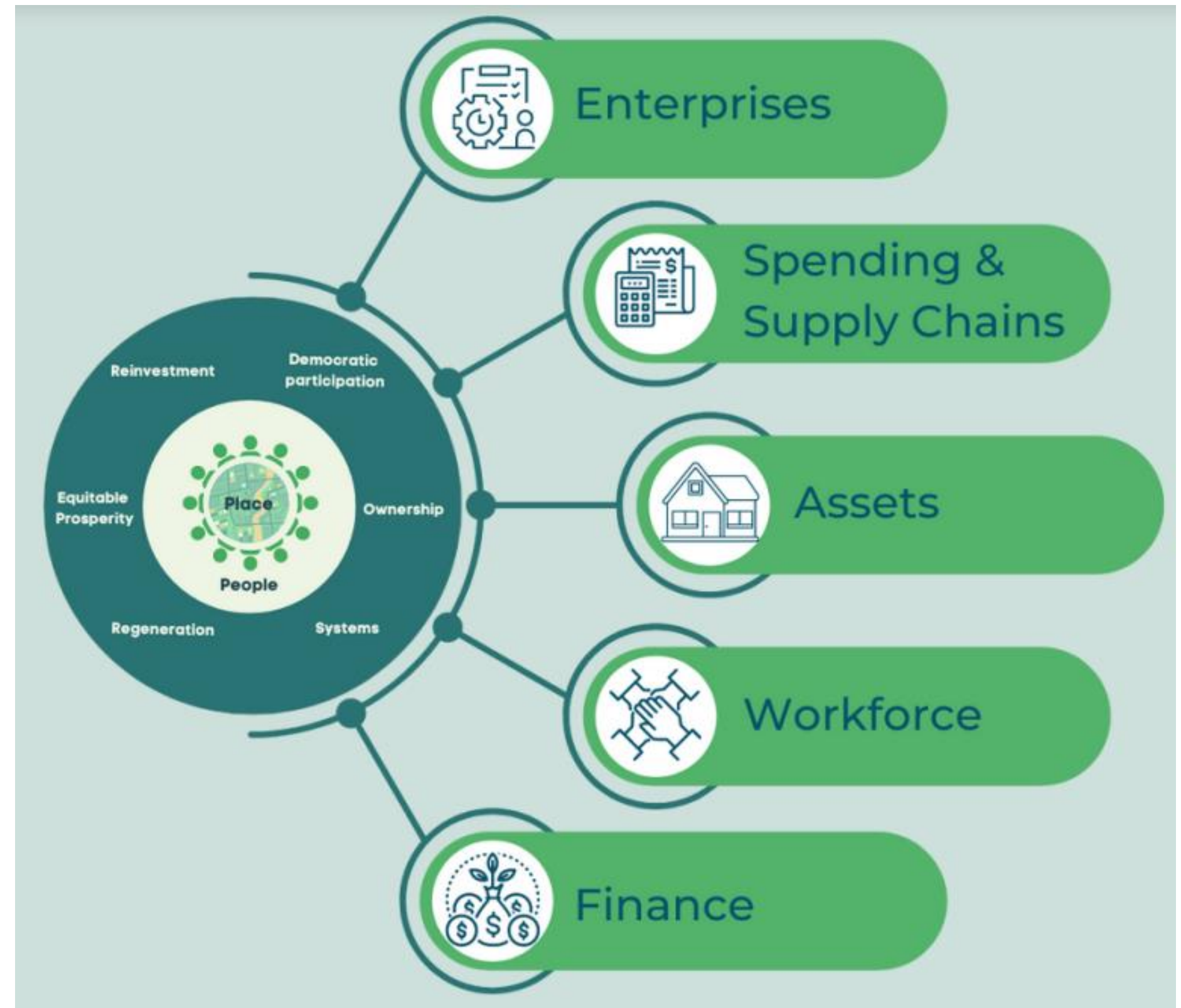
### Venus Bay and Tarwin Lower Communities



# Community Wealth Building

....shifts an economy towards these principles by identifying intervention areas or 'pillars' that government, enterprises and communities can influence.

The case studies that follow provide examples of where Community Wealth Building is demonstrated through the enterprises and legal entity types that each community has established.



# Case Study 1. Yackandandah Community Development Company

This entity started out to save the local petrol station. The community was quite concerned when the petrol station looked like closing in 2003. They knew that when people went to buy petrol in a larger town, they would be likely to do their shopping as well and the local economy would start to decline.

The great thing about the Yackandandah example is the way the structure has responded as new parts of the business have developed over time. The company now runs the local paper and farming supplies store and supports initiatives of Totally Renewable Yackandandah through various subsidiary entities.

“ I love this example because they had the forethought to set up the organisation in a way that allowed it to make the most of future opportunities so they could do more for the community and keep more of the economic activity circulating in Yackandandah” Sam Doove, Ethical Fields.



## Case Study 2. ZNET Uralla Shire



Partnered with  
CORENA on local  
solar PV  
Landlord-Tenant  
project

Advocacy

A Z-Net office  
that provides  
ongoing advice

To work towards the goal of 100% renewable energy for home and business use.

By reducing energy use, through efficiency improvements, and by installation of cost-effective renewable energy generation.

Z-Net Uralla evolved from operating as a sub-group of an existing entity to becoming their own incorporated association

Free home  
energy reviews  
online

Workshops

# Case Study 3. Geelong Sustainability

- Geelong set up an incorporated association, but then created a company specifically for their commercial energy project
- Both entities continue to operate to jointly serve the goals of this group.



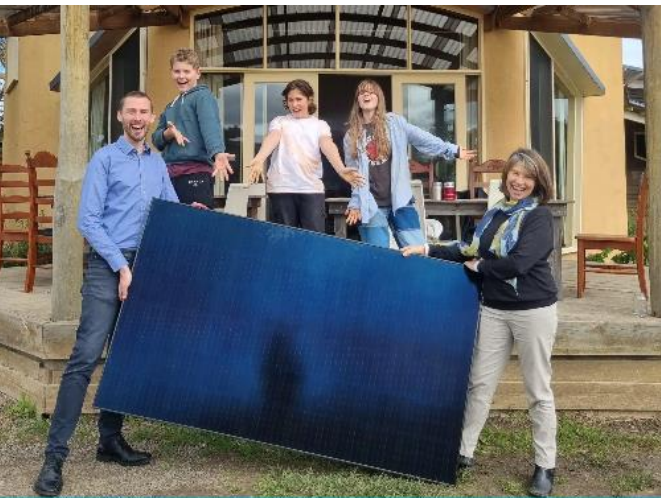
### All-Electric Homes Program

Assisting households to get off gas and make the switch to an efficient all-electric home powered by renewable energy.



### Geelong Community Solar Program

The Geelong+ Community Solar Program concluded in late 2021, having supported 276 households and businesses to install solar and battery systems.



### Community Energy Revolving Fund

Supporting community organisations to install solar, batteries and energy efficiency measures. Helping them cut power bills and carbon emissions.



### Community Battery Feasibility Study

As the transition to renewable energy is becoming more and more progressed, we investigated the viability of community batteries for Greater Geelong.



### Community Owned Renewable Energy

CORE Geelong was established by Geelong Sustainability to facilitate the transition to a sustainable energy system.



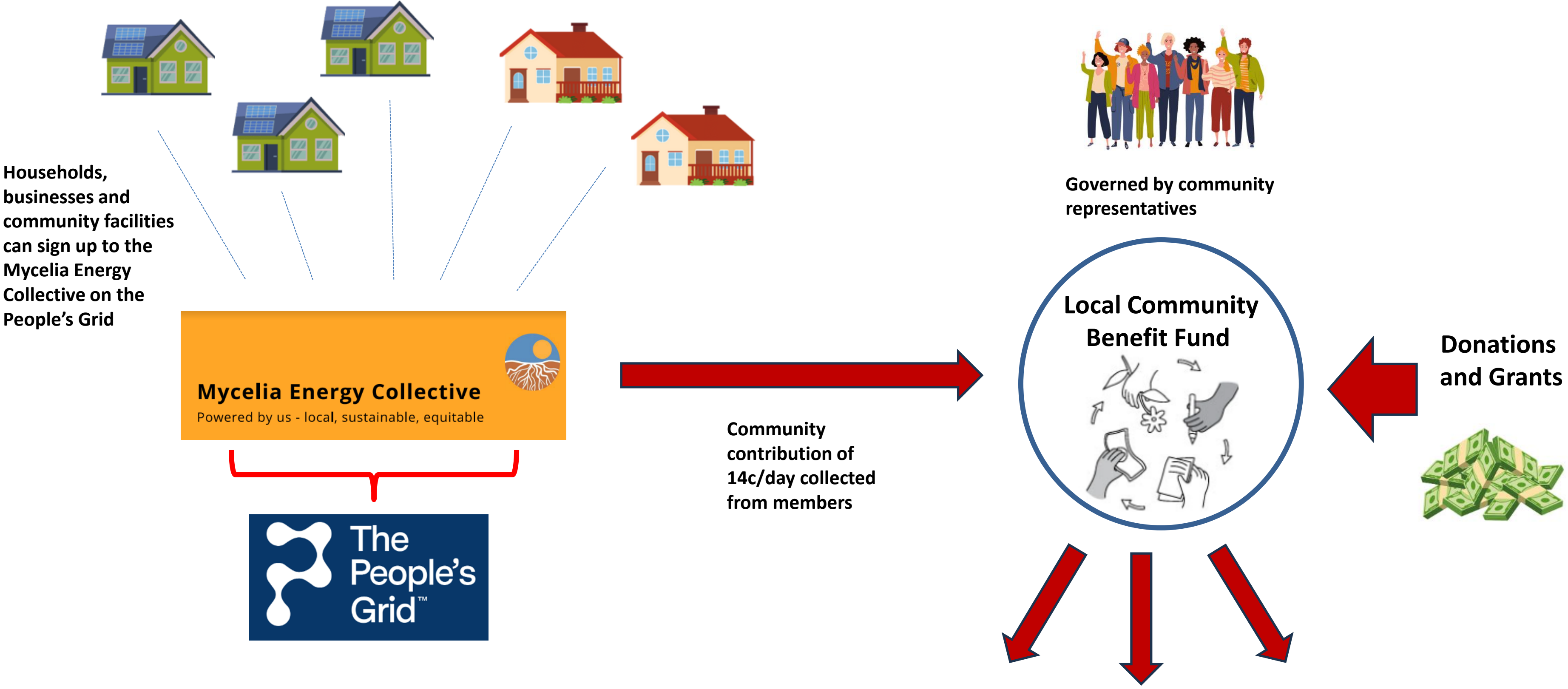
### Project 1: Crowdfunded Solar System - INSTALLED

South Geelong Primary School - 9.25kW Crowdfunded Solar System



### Project 2: Crowdfunded Solar System - INSTALLED

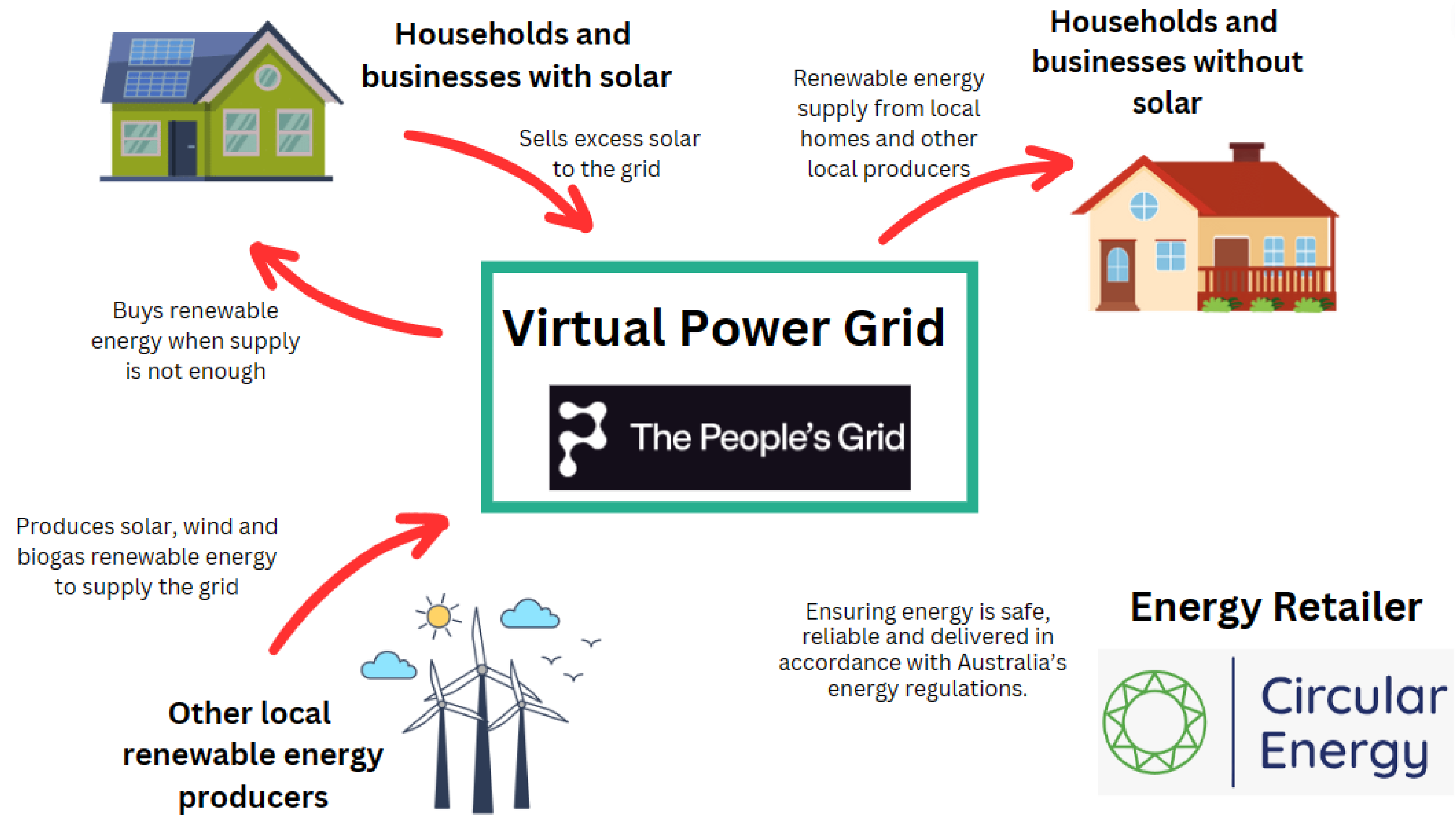
# Case Study 4. Mycelia Renewables and the Mycelia Energy Collective supporting local community benefit-sharing



Mycelia Renewables Ltd. is a not-for-profit, company limited by guarantee and registered charity. Mycelia is facilitating the Mycelia Energy Collective on The People's Grid.

Funds and an organization to support energy initiatives such as bulk buys, energy efficiency audits and upgrades.

# The People's Grid and the Mycelia Energy Collective – enablers of community energy



# High level analysis of why these community-owned initiatives work and some of the challenges they face

## Z-NET Uralla

### Why it works?

- Utilised an existing funding mechanism
- Offers several low-cost initiatives for changing behaviours
- Tackles the difficulty of solar for renters
- Physical presence helps to engage with community and build trust

### Challenges

- Runs largely on the time and energy of volunteers



## Geelong Sustainability

### Why it works?

- Builds wealth by increasing local asset ownership, investment opportunities, energy generation and using local suppliers. Addressing energy equity
- Has scaled to 7+ employees
- Addresses multiple pathways

### Challenges

- volunteer committee of management faced massive financial, administrative and human resource management workload
- 80% grant funded



## People's Grid

### Why it works?

- Provides a platform for exchanging local energy generation and consumption.
- Provides a funding and governance mechanism for contributing to community initiatives

### Challenges

- Needs wider scale community support to be impactful locally





In summary, the different types of legal entities ought to be considered by thinking through and deciding on which entity might be most enabling of our energy goals. The points below and the summary on the following page cover the main considerations that will inform our deliberations, including the desirability of a new entity, versus partnering with existing organisations or a combination of both.

There are a wide number of different and possible entity types.

Some are suitable for receiving donations and grants....some not.

Some are suitable for community investors.... some are not.

Some require more administration than others.

But many can be adapted to create transparency & democracy via the constitution.

We can also use more than one, OR partner with other organisations

# Comparisons of entity types to inform our deliberations

Company Type	No. of members or owners	FUNDING			GOVERNANCE				Suitability	Local Existing Entities
		Grant/ Donation Funding	Other Funding Options	Dividend Payments	Transparent	Democratic	Flexible	Admin requirements		
<b>Private Company</b>	Min. 1, Max. 50.	Less likely	Shares / Loans	Yes	No	Partly - Can tailor constitution	Partly	Low		Gelong Sustainability - subsidiary
<b>Public Company</b>	Min. 1, Max. unlimited.	Less likely	Shares/Loans	Yes	Yes	Partly - Can tailor constitution. Board represents community	Yes - depending on constitution	High - requires audited annual reports and Board. Min. 3 directors		Yackandandah Community Development Co.
<b>Company Limited by Guarantee (NFP)</b>	Min. 1. No max.	More likely	Loans /Membership	No - but interest payments ok	Yes	Yes -	Partly	Mid range - requires annual review and Board (min. 3 directors).		
<b>Incorporated Association</b>	Min. 5. No. max.	More likely	Loans/ memberships	No	Yes	Yes -	Partly	Mid range - requires committee members and		Venus Bay Community Centre, CORENA, Z-Net
<b>Cooperative</b>	Min. 5, No max.	Grants less likely, Non-distributing coop can become a registered charity.	Members / Loans /share capital	If a distributing coop	Yes	Yes - one member, one vote	Yes - depending on constitution	High - requires audited reports for a distributing Coop. A less familiar structure.		Energy Innovation Cooperative (Southern CORE), Mycelia

VENUS BAY  
COMMUNITY CENTRE

**Mycelia Energy Collective**  
Powered by us - local, sustainable, equitable



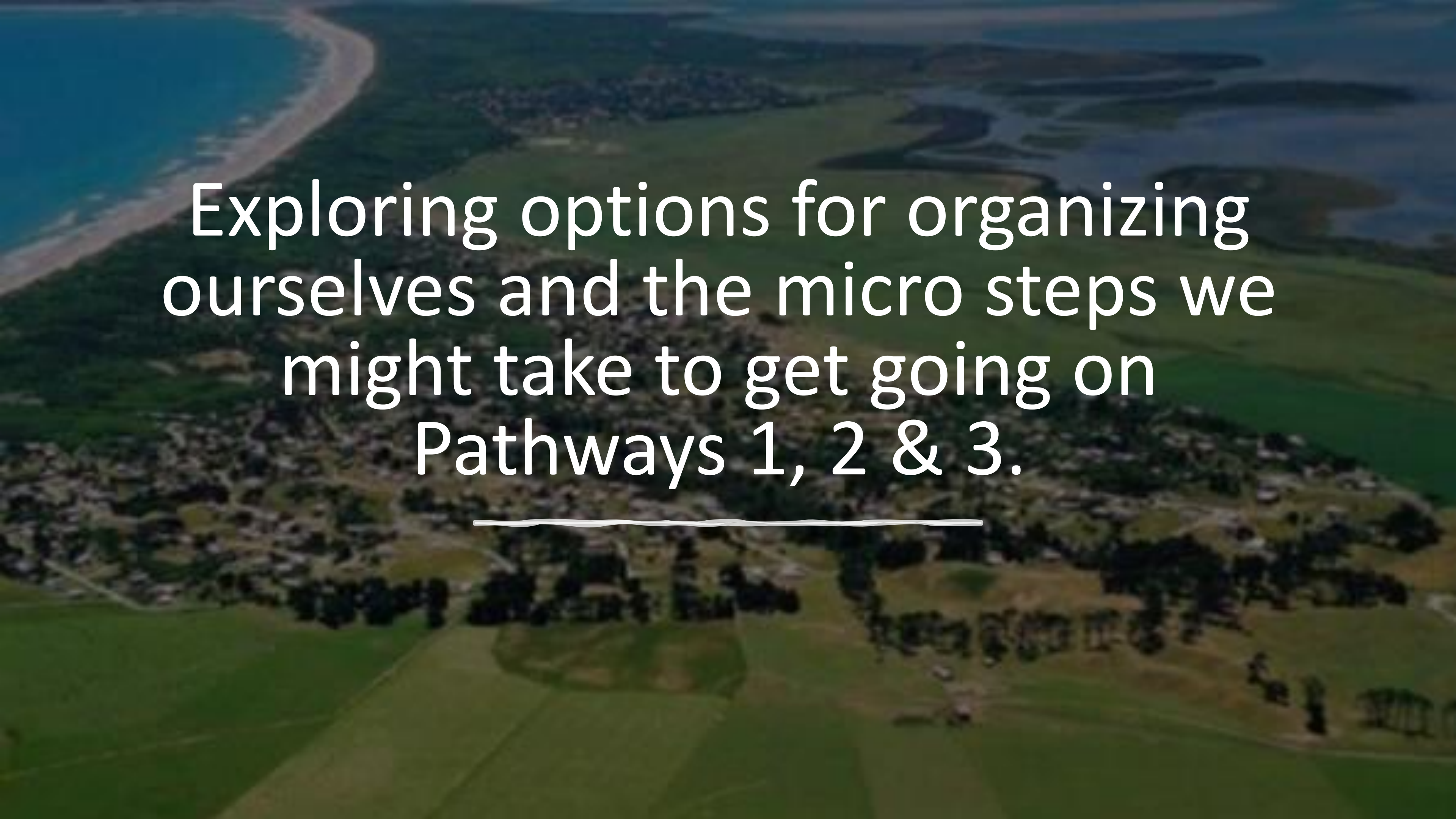
Other  
Community  
projects or  
partners?

**Southern**  
**C.O.R.E FUND**  
Community Owned Renewable Energy

Whilst we work through the types of entities that might best support our community energy goals, we could partner with existing organisations - these are some of the possibilities.



*South Gippsland  
Shire Council*

An aerial photograph of a coastal landscape. In the top left, there is a sandy beach meeting a clear, turquoise ocean. The rest of the image shows a vast expanse of green fields, some with clusters of trees, and a winding path or road. The overall scene is bright and natural.

Exploring options for organizing  
ourselves and the micro steps we  
might take to get going on  
Pathways 1, 2 & 3.

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## Workshop #4 Activities 1 & 2 and the outputs from each combined

Workshop participants were invited to join small groups on six tables, where they had focused discussions on the first three pathways ( two tables for each pathway):

- Households
- Community Facilities
- Businesses

They were asked to identify the micro steps that would be needed for resourcing and funding and getting us organised on each pathway (remembering the community's values and wealth building principles).

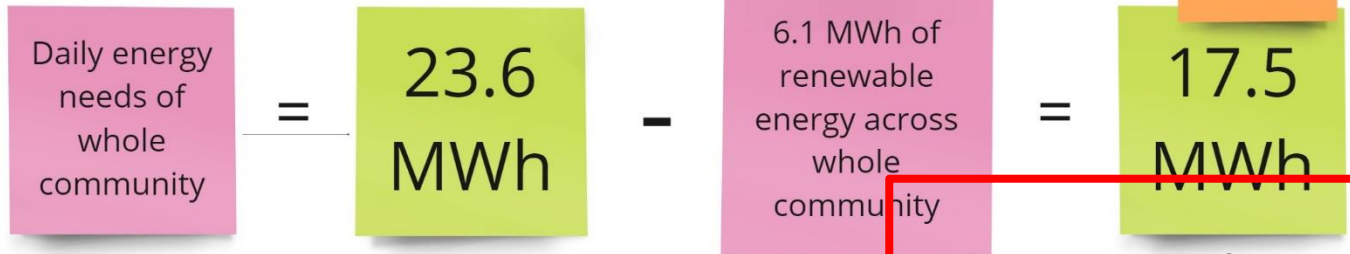
The questions each table were asked to respond to were:

- What resources and funding would be required?
- What could be the first steps of organising to move your pathway forward?

Each table had a copy of the pathways that were developed at Workshop #3 and invited to add their ideas.

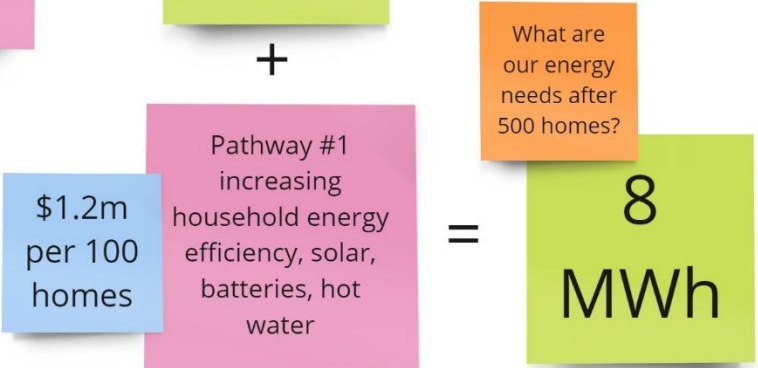


These are the five energy pathways we have been exploring through our Community Energy Study and the contribution to total energy needs across the community they might be expected to generate. In workshop #4 we concentrated on Pathways 1, 2 & 3 as they present opportunities for action in the short-to-medium term.



These pathways can be undertaken in any order and combination - they are not linear.

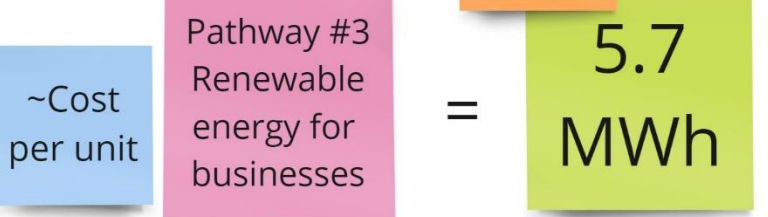
How do our values influence what we do first, then next, then next?



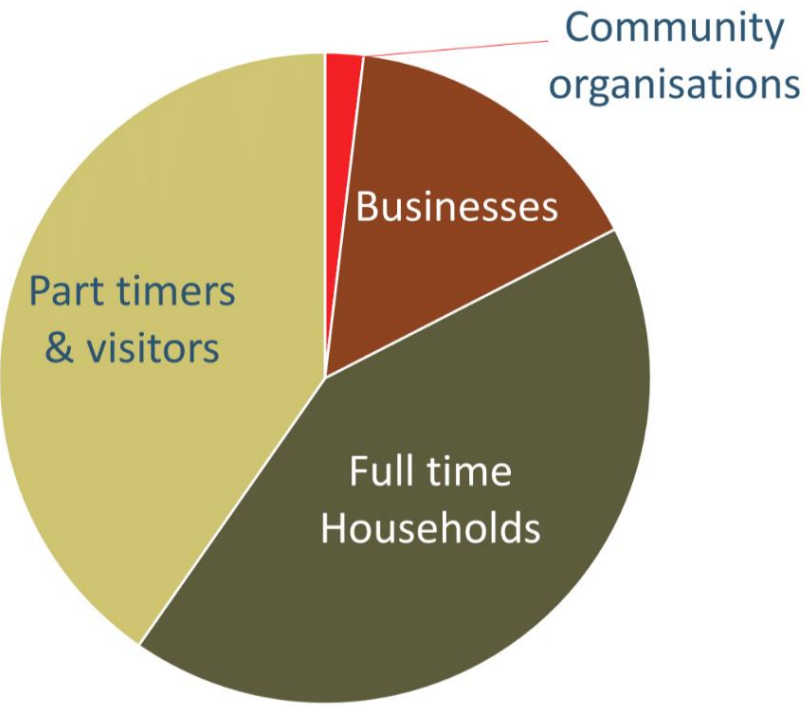
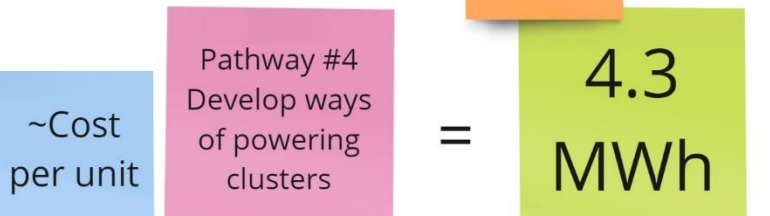
**Pathway 1 – Households**



**Pathway 2 – Community Facilities**



**Pathway 3 - Businesses**



Research through our Community Energy Feasibility Study has previously revealed that:

- Solar installation on household roofs is the main driver of sustainability
- The Community facilities and Business pathways contribute primarily to safety and can provide critical services in emergencies
- These pathways, along with the practice of using energy flexibly, need to be in place to enable Pathways #4 and #5

During the workshop, the small groups at each table reviewed the ideas surfaced at previous workshops and explored what ways of organising, what further research and engagement and what types of resources were needed in the short-to-medium term for each pathway

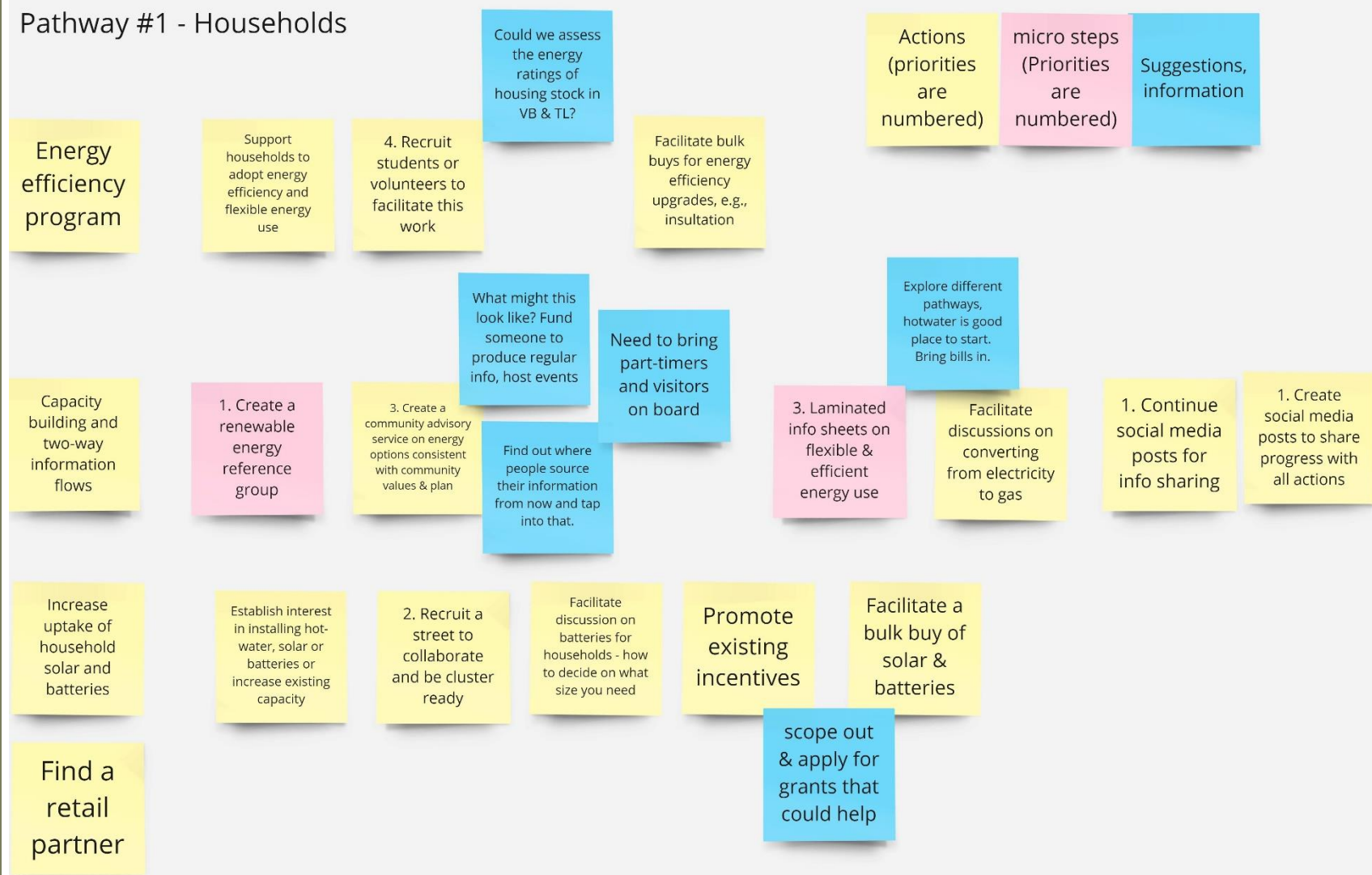
- Next 'immediate steps' were then developed to show the action that could be taken.



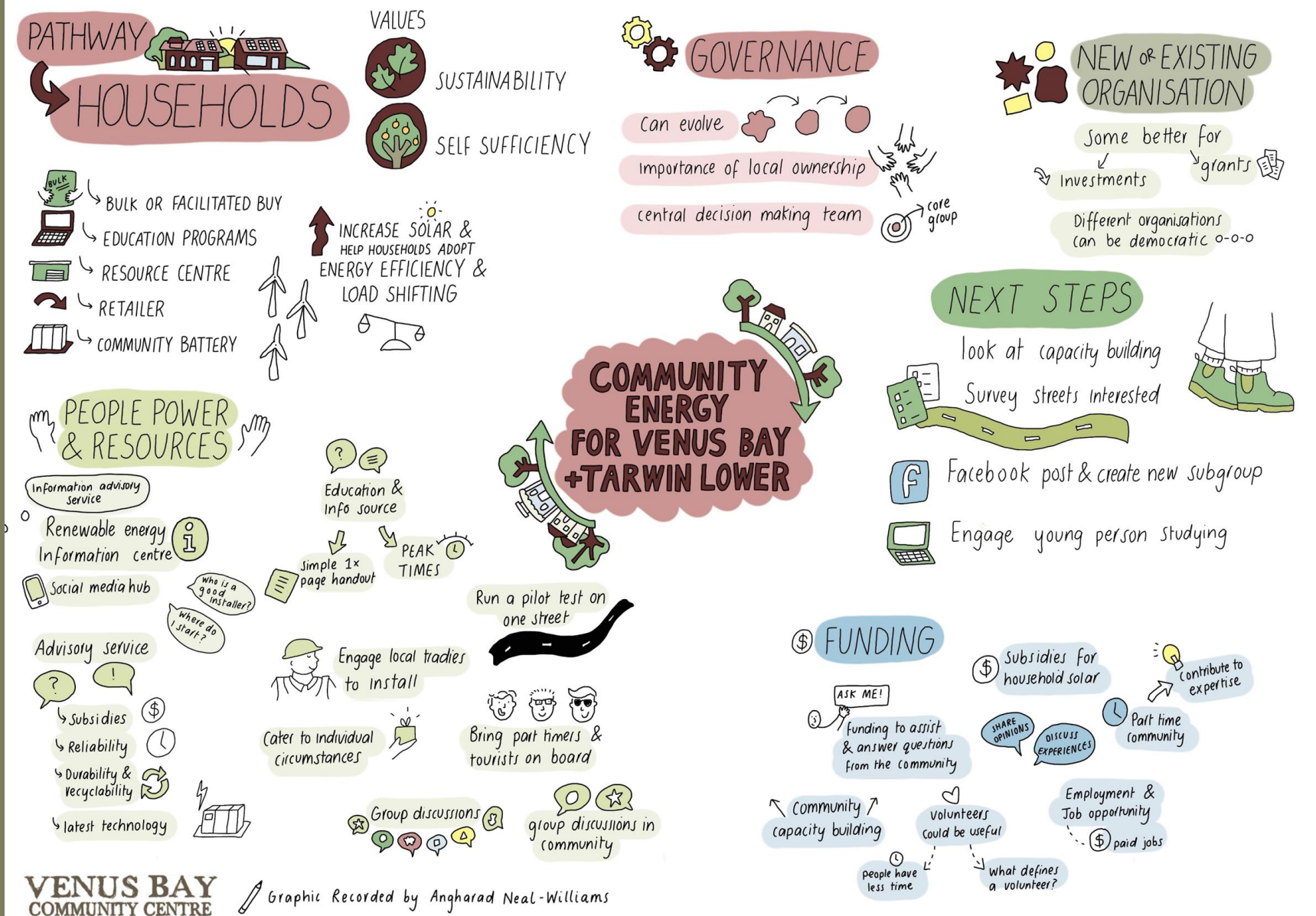
Updated actions and ideas in support of Pathway #1 – Increasing uptake by households of energy efficiency and renewable energy – surfaced during Workshop #4 activities



Pathway #1 - Households



Graphic recording of presentation of actions in support of Pathway #1 – Increasing uptake by households of energy efficiency and renewable energy – during Workshop #4 activities

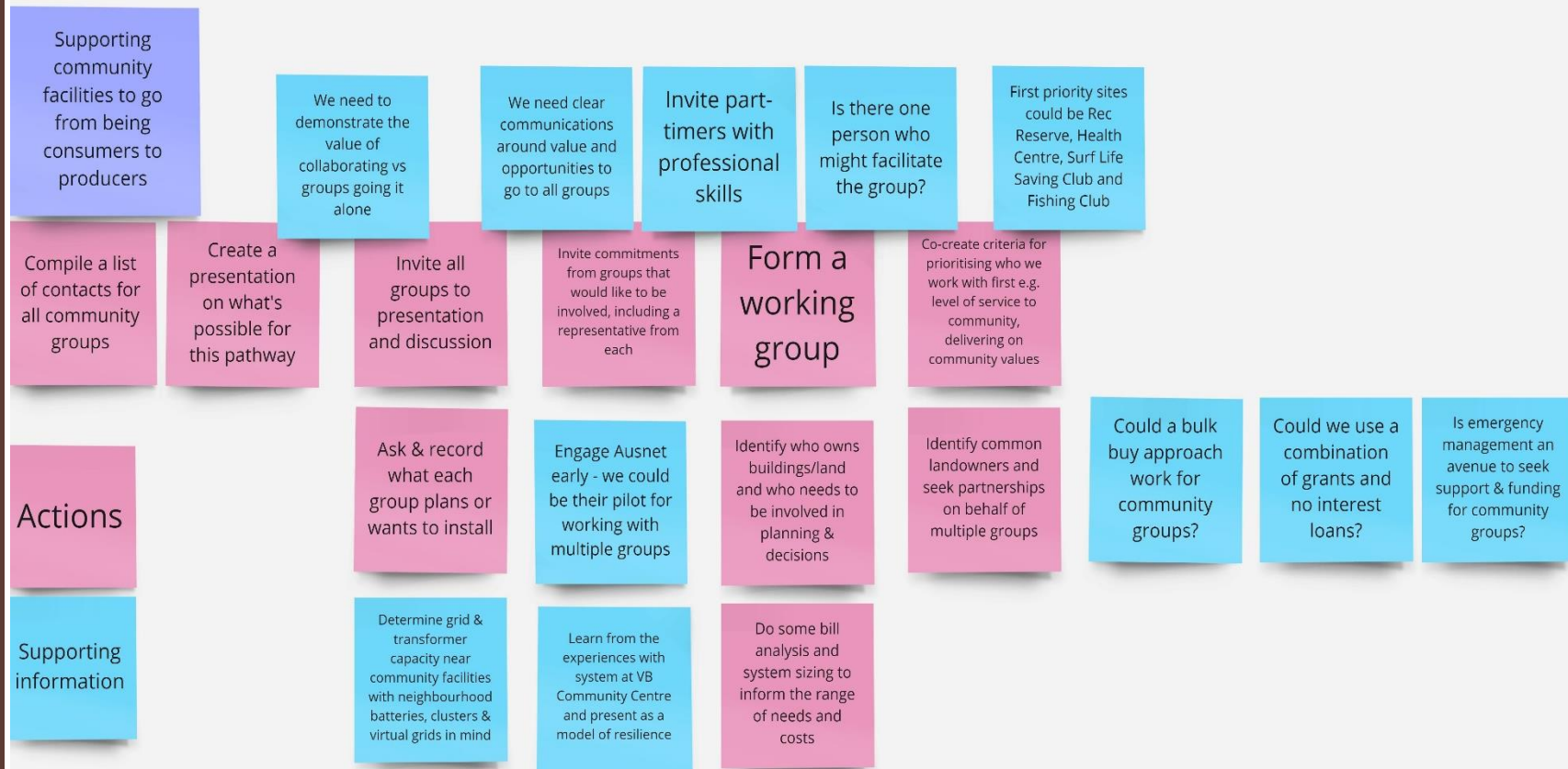




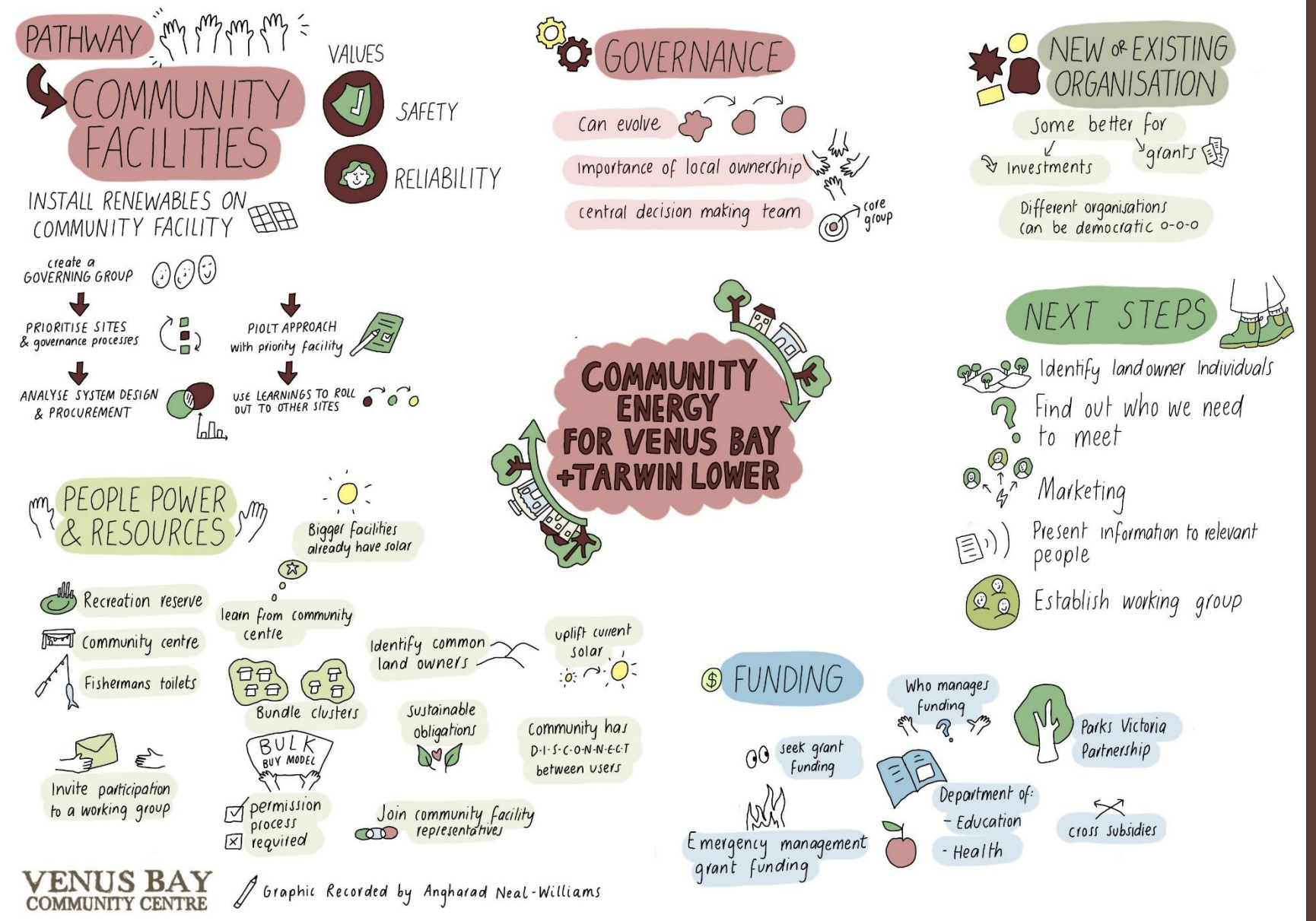


Updated actions and ideas in support of Pathway #2 – Increasing uptake by community facilities of energy efficiency and renewable energy – surfaced during Workshop #4 activities

### Pathway #2 - Community Facilities



Graphic recording of presentation of actions in support of Pathway #2 – Increasing uptake by community facilities of energy efficiency and renewable energy – during Workshop #4 activities

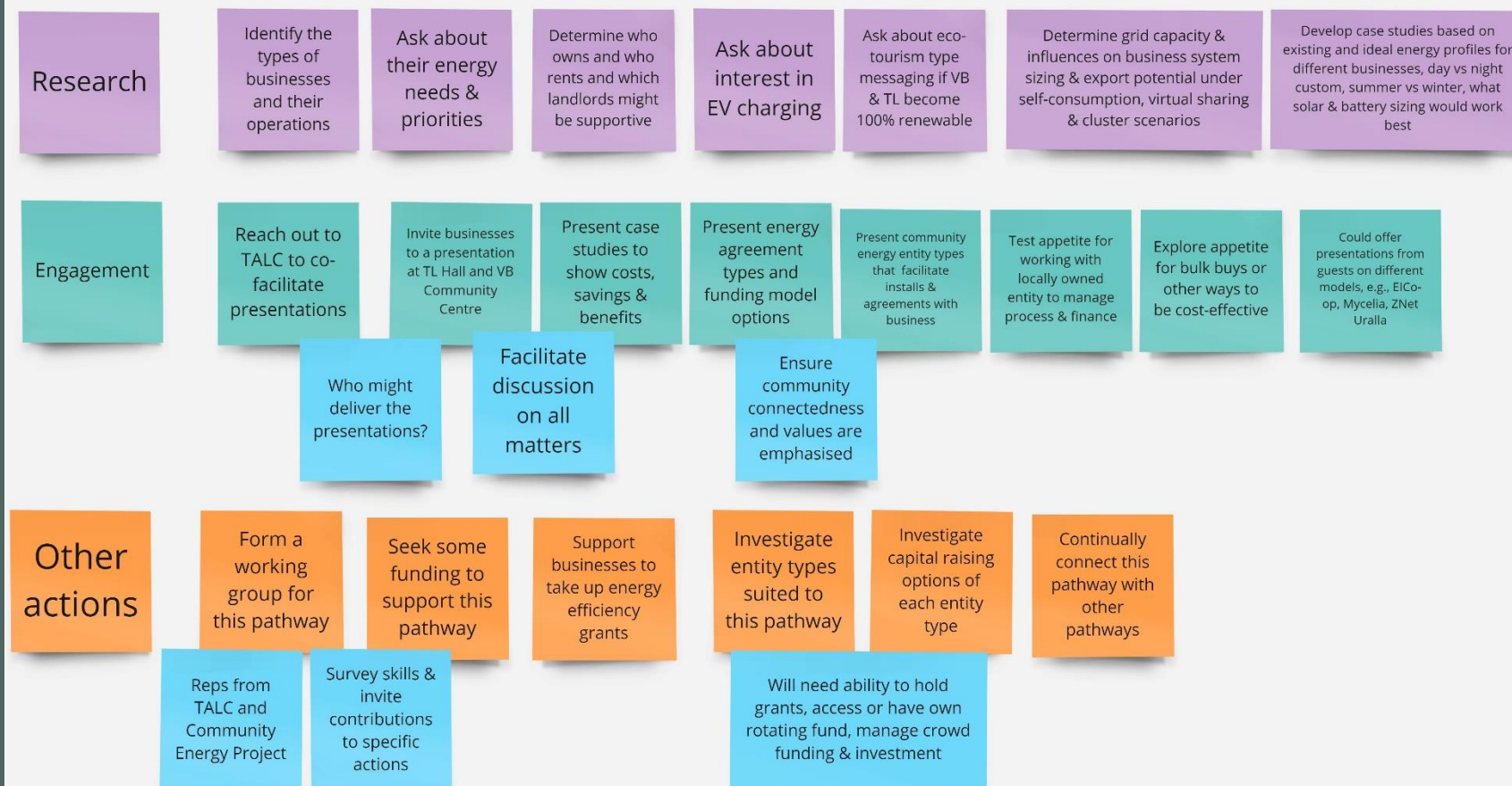


Updated actions and ideas in support of Pathway #3 – Increasing uptake by businesses of energy efficiency and renewable energy – surfaced during Workshop #4 activities

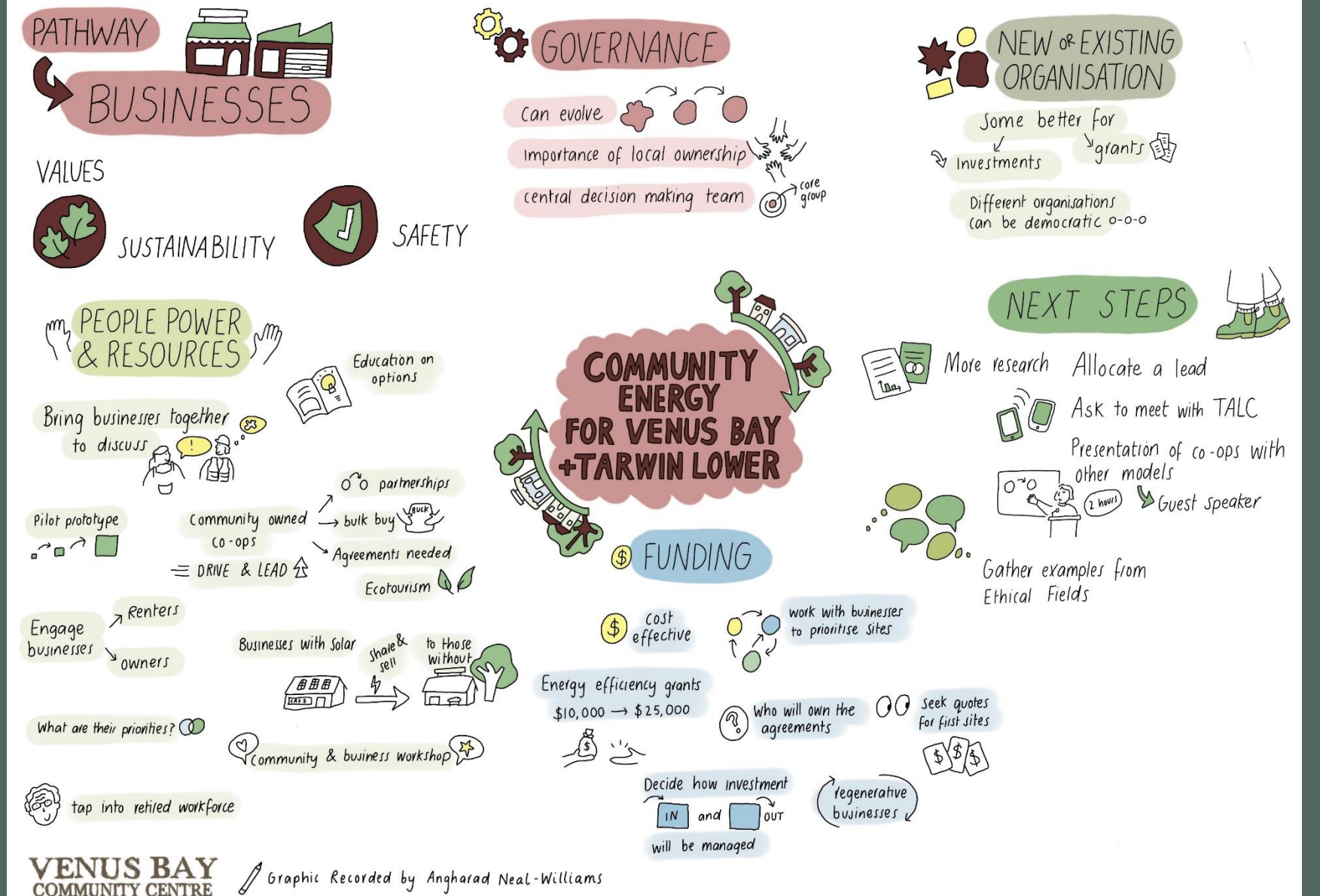


### Pathway #3 - Businesses

Do all these steps first then pursue steps in original diagram



### Graphic recording of presentation of actions in support of Pathway #3 – Increasing uptake by business of energy efficiency and renewable energy – during Workshop #4 activities



# Next steps

- **Workshop #5** – We've got this! is being planned and will be facilitated at **11am to 2pm on Sunday August 20<sup>th</sup>** , with the aim of sharing, testing and refining the Venus Bay and Tarwin Lower Community Energy Action Plan
- The Project Team will be submitting a report to the funders on Venus Bay and Tarwin Lower Community Resilience and Energy Reliability Feasibility Study on July 26<sup>th</sup>. This will include a Working Draft of the Community Energy Action Plan, still to be refined and updated at and after August 20<sup>th</sup>.
- *When* the DRAFT Community Energy Action Plan is ready it will be made available on the VBCC website, [Community Energy, Reports page](#).
  - Feedback is most welcome and volunteers to implement this plan are needed.
  - Some people have already nominated themselves to help take this initiative forward – thank you.
  - Are you interested? Please contact Alyson at VBCC to let her know
  - A '**What have we learned**' webinar to present the project findings and DRAFT Community Action Plan is being offered at 5.30 pm on Wednesday August 9<sup>th</sup> – join in by following this meeting [link](#)
- Mycelia Renewables are hosting an online presentation and discussion on the Mycelia Energy Collective – check their [Facebook page](#) for details