

Approach

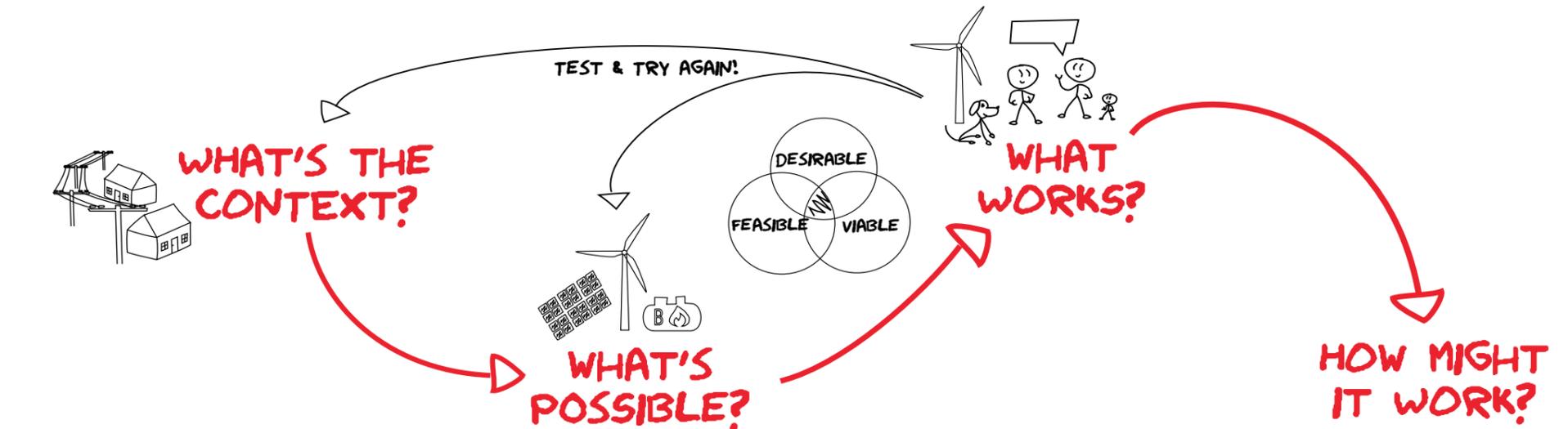
The Blueprint sets out the approach taken, the logic and principles applied in assessing options and the framework used for developing the implementation plan. The Blueprint and the Uralla Case Study are both useful resources for communities seeking to become a Z-NET.

What is a Z-NET?

A zero net energy town (Z-NET) is a community that reduces and balances its local energy needs with a 100% renewable energy supply. This is done firstly by reducing energy use and then importing or locally producing enough energy to meet or exceed the community's demand.

Becoming a Z-NET

Becoming a Z-NET sounds like a great idea—so where do we start? To become a Z-NET we need to find a path that's ambitious, realisable and in the long-term interests of the local community. To do this, it needs to be technically and practically feasible, financially viable and desirable to the local and wider community. The approach taken has been to carefully consider the context, identify all possible options and assess whether they will work and then resolve how they are best implemented.



What's the context?

The first step is to understand the context, which includes identifying the characteristics of the location and the community and its existing energy use. The context defines current and future energy requirements, identifies opportunities and highlights issues that present limitations or risks.

What's possible and will it work?

The next step is to understand all the possible options and determine the best fit within the local context. There are many options to reduce energy use and produce energy from renewable sources. To find the right approach we need to identify if options are feasible, viable and desirable.

How it might work?

Having a model is great but it's crucial to have a plan to ensure it gets done. Understanding who is responsible for what and being clear about the resource requirements are key to ensuring we have a practical and reasonable path to achieve the goal of becoming a Z-NET.

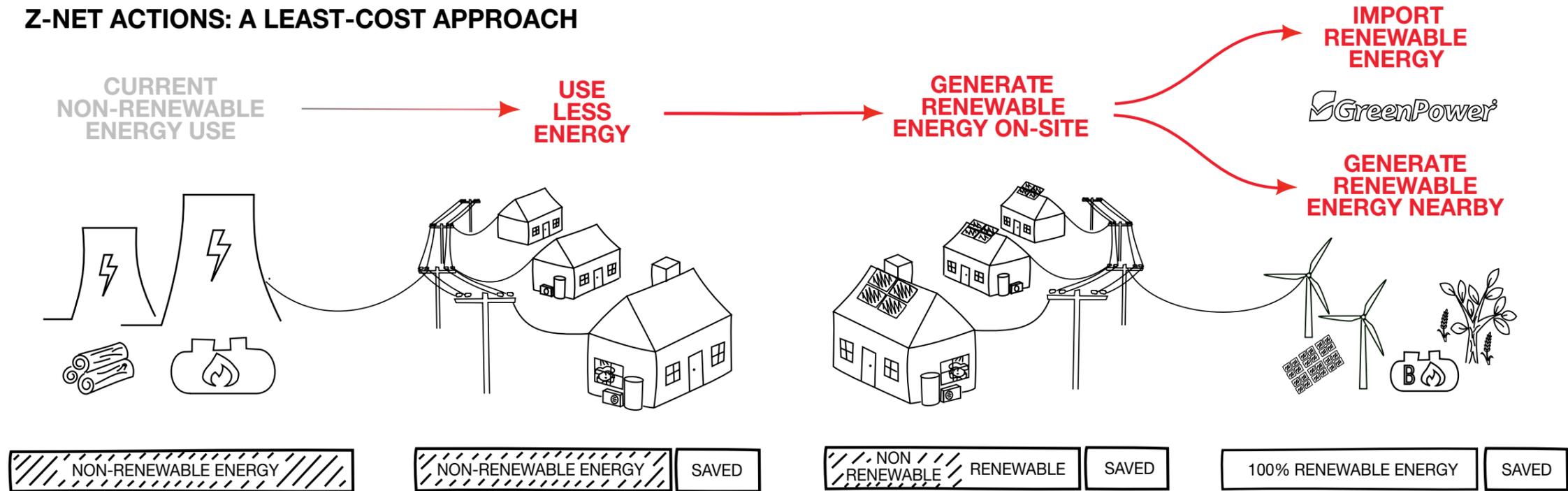
Logic

The Blueprint sets out a simple logic for communities across Australia to establish a least-cost approach to becoming a Z-NET. Becoming Z-NET is technically possible today with available technology, however in practice cost is a key consideration for most if not all participants.

To establish the case for action, the community needs to weigh up the benefits and the costs of options available, such as using less energy for things like lighting and hot water, and compare these to other possible options. The Blueprint logic ensures that actions that have the most benefits or least cost are taken first.

The Blueprint also recognises that benefits and costs of renewable energy options change over time. Recognising this allows a community to take practical action immediately whilst resolving the most appropriate long-term investment to reach the Z-NET goal.

Z-NET ACTIONS: A LEAST-COST APPROACH



THE BUSINESS CASE

FOR ANY ACTION, COMPARE ALL THE UPFRONT COSTS AND ALL OF THE BENEFITS FROM NOT HAVING TO BUY NON-RENEWABLE ENERGY. IT MAKES SENSE TO TAKE ACTIONS THAT HAVE THE MOST BENEFITS OR LEAST COST FIRST.

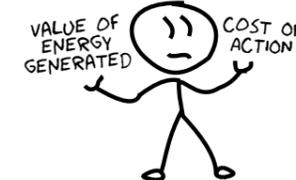


NET BENEFIT

INVEST IN ENERGY EFFICIENCY MEASURES IF THE VALUE OF ENERGY SAVINGS OUTWEIGHS THE COST OF IMPLEMENTING THE ACTION.

NET BENEFIT

INVEST IN ON-SITE GENERATION LIKE SOLAR PANELS WHEN THE VALUE OF ENERGY GENERATED OUTWEIGHS THE COST OF BUYING REGULAR ENERGY.



LEAST COST

TO GET TO 100% Z-NET: COMPARE THE OVERALL COST OF RENEWABLE ENERGY GENERATED NEARBY AT A COMMERCIAL SCALE WITH THE COST OF GREEN POWER.

Option assessment

The following is an overview of the assessment approach applied to each of the possible options to achieve zero net energy, such as energy efficient appliances, solar PV and improved firewood resource management.

What's possible?

Each option has characteristics that determine whether it will suit a local context and contribute to the Z-NET goal.

The technology or resource

» What is the technology or resource and what are its characteristics?

The local context

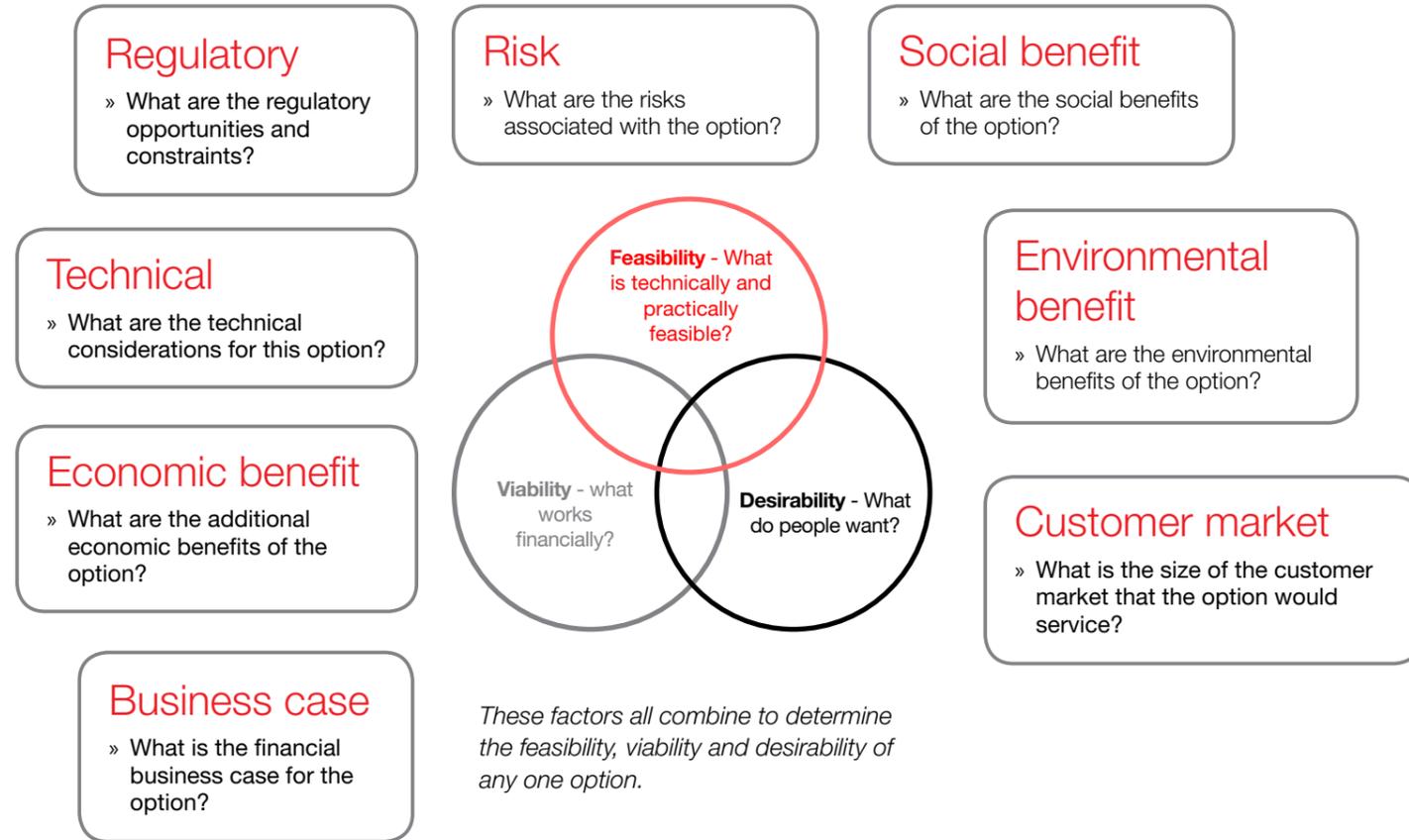
» What is the local context that the option responds to?

The impact

» What impact on the goal of zero net energy can this option have?

Will it work?

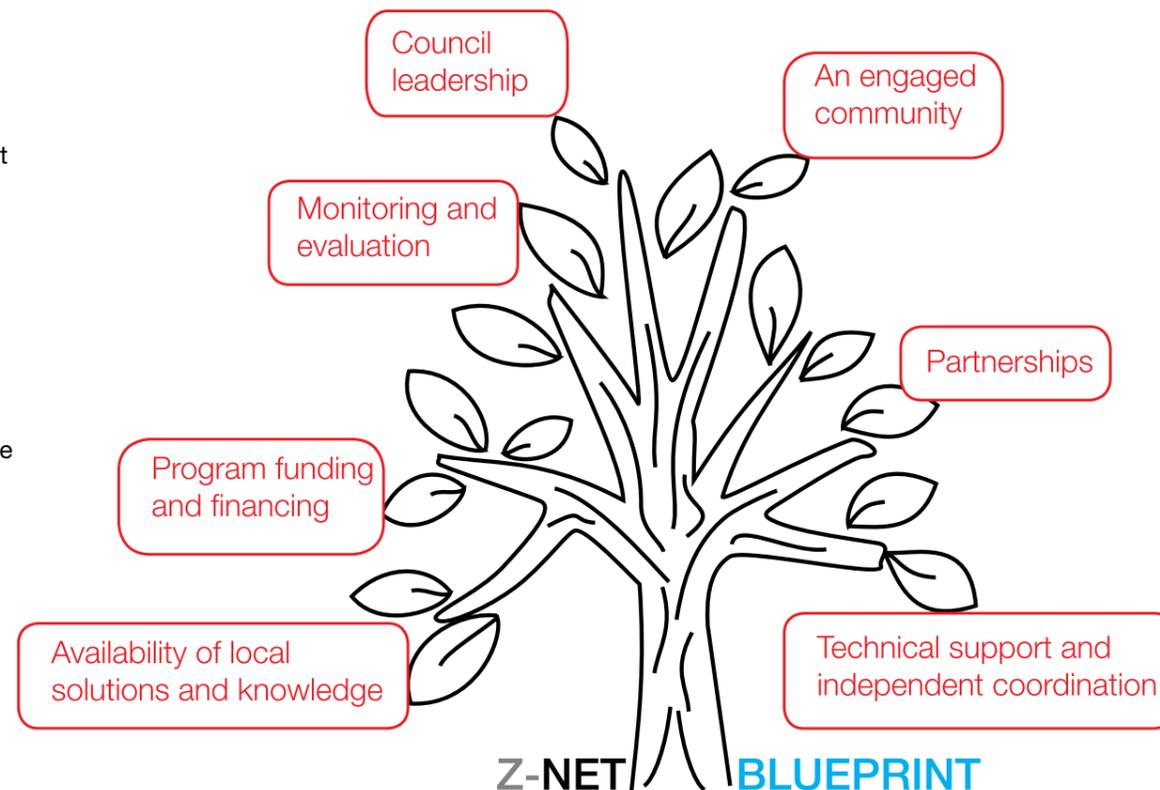
A number of factors need to be considered in order to evaluate technology and resource options.



Implementation

The implementation phase of becoming a Z-NET can extend for a number of years. It is therefore crucial that the community has an organised approach. The key ingredients of this approach are:

- » an action plan which outlines local programs and projects
- » a range of enablers that accelerate or assist program and project delivery through leadership, capacity building or leveraging investment or expertise. The graphic opposite demonstrates these enablers of success for a Z-NET.
- » monitoring and evaluation to measure success and identify the most effective approaches for reaching the goal.



Find out more & get involved

To find out more, go to the Z-NET website and sign up for the Z-NET news.

www.z-net.org.au