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Blueprint

Uralla Case Study

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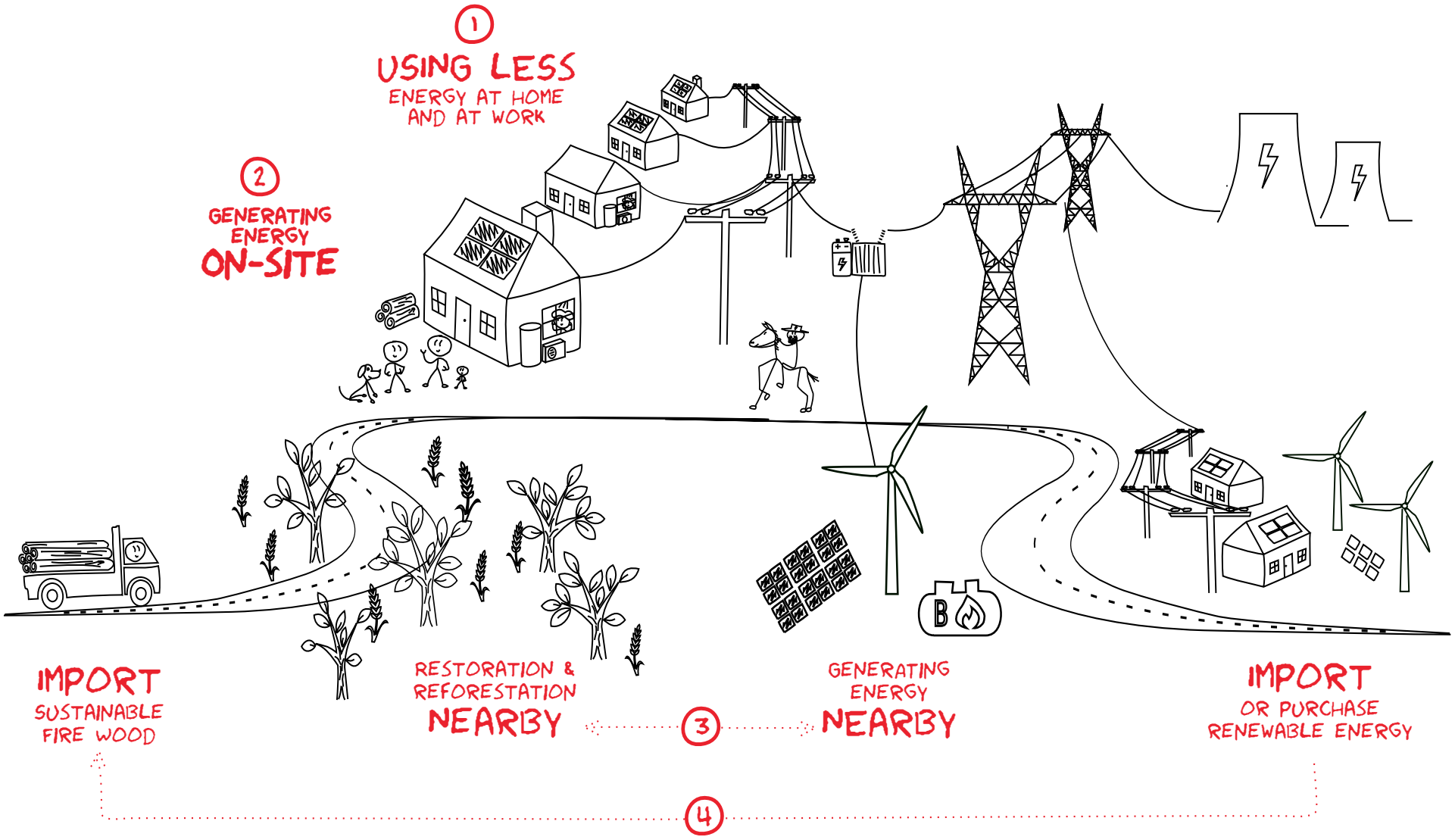
SO IF URALLA WANTS TO TAKE ACTION TO BECOME A ZNET...

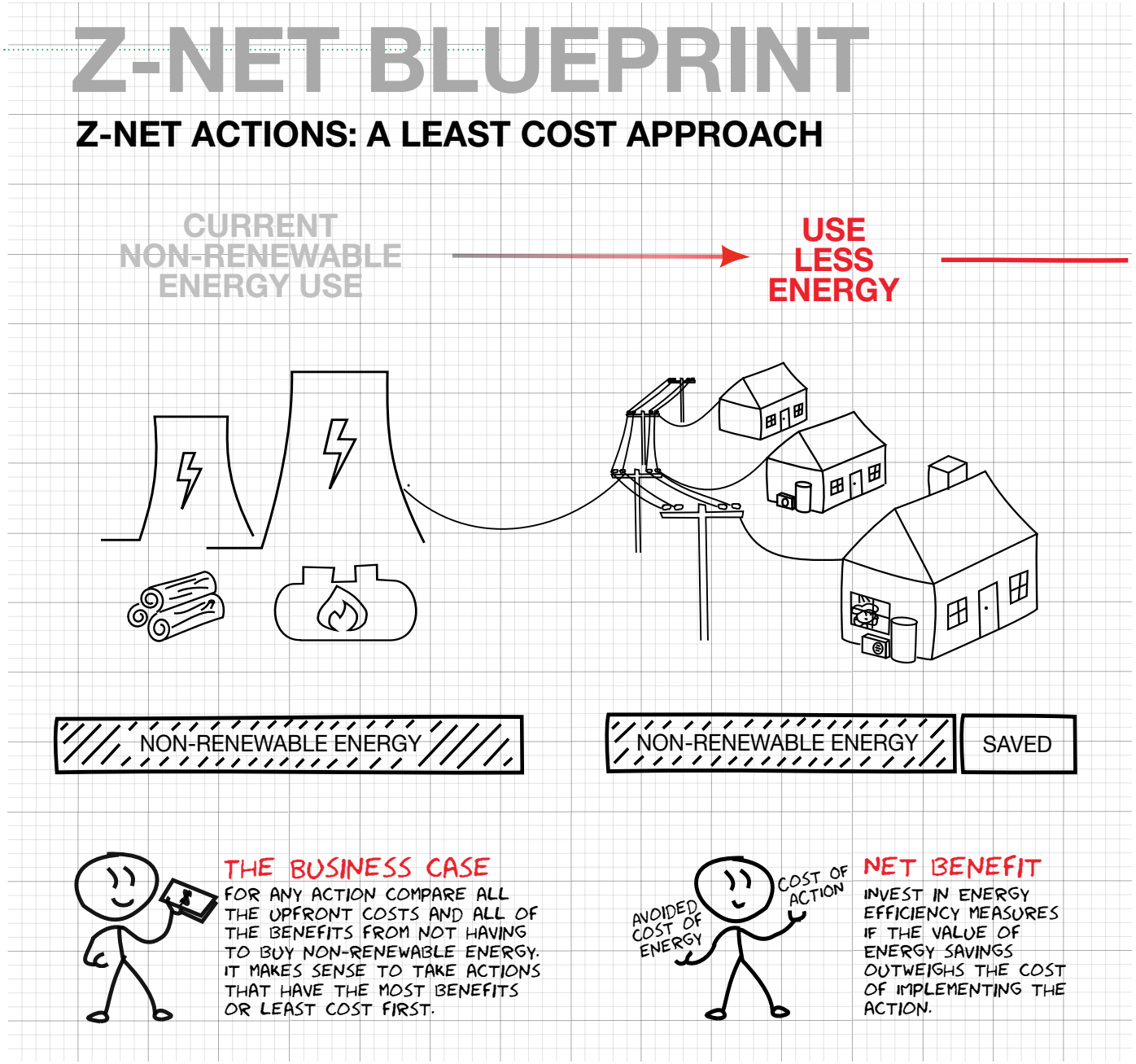
WHAT CAN CONTRIBUTE TO ZERO NET ENERGY



The Z-NET Blueprint

The Z-NET Blueprint sets out a simple logic for communities across Australia to establish a least cost approach to investing in renewable energy. To establish a business case for action the community needs to weigh up the benefits with the costs and compare this to other possible actions.

The Blueprint ensures that actions that have the most benefits or least cost are taken first. The Blueprint also recognises that both benefits and costs of renewable energy options change over time. The approach allows a community to take practical action immediately and resolve a framework to consider future investment to meet the Z-NET goal.



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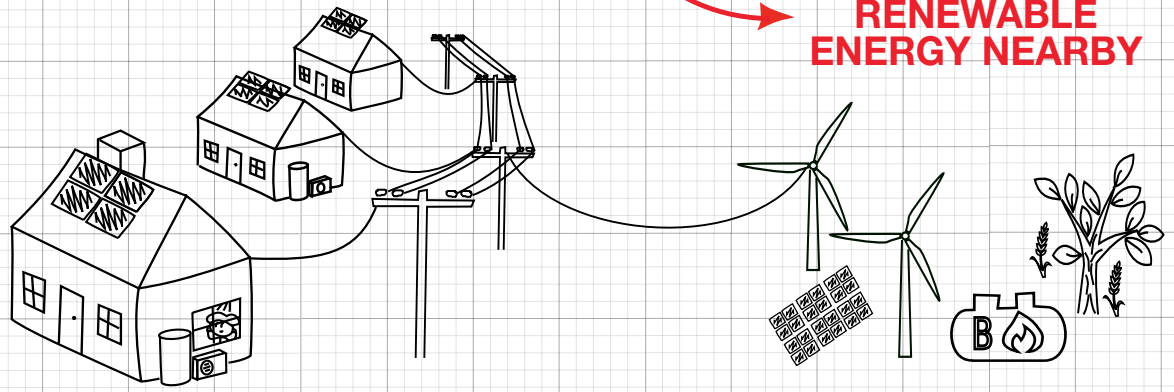
GENERATE RENEWABLE ENERGY ON-SITE

IMPORT RENEWABLE ENERGY

GreenPower

GENERATE RENEWABLE ENERGY NEARBY

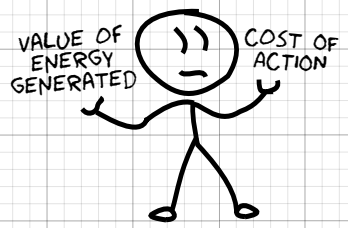


NON RENEWABLE	RENEWABLE	SAVED

100% RENEWABLE ENERGY	SAVED

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.

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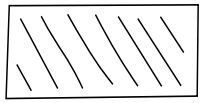
Summary of electricity option evaluation

Options	Impact (% ZNET)	Business Case	Technical	Regulatory	Managing risk	Customer market	Enviro benefit	Social benefit	Economic benefit
Using less – Hot water	3.1	✓✓	✓✓	✓✓	✓✓	✓✓✓	✓✓	✓✓	✓
Using less – Lighting	2.2	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓	✓✓	✓✓	✓
Using less – Appliances	3.1	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓	✓✓	✓✓	✓
Using less – Business energy efficiency	0.9	✓✓✓	✓✓	✓✓✓	✓✓✓	✓✓	✓	✓✓	✓✓
Generating on-site – Residential and business solar PV	12.6	✓✓✓	✓✓✓	✓✓	✓✓	✓✓✓	✓✓✓	✓✓	✓
Generating nearby – Utility scale electricity generation	?	✗	✓	✓	✗	✓	✓✓✓	✓✓	✗
Importing renewable energy (GreenPower)	?	✓	✓✓✓	✓✓	✓	✓	✓✓✓	✓	✗

Reading a cost curve

1. Each scenario represents a scenario that contributes to a ZNET

The height and position of a block either below or above the x-axis, shows the cost or each % of getting to ZNET

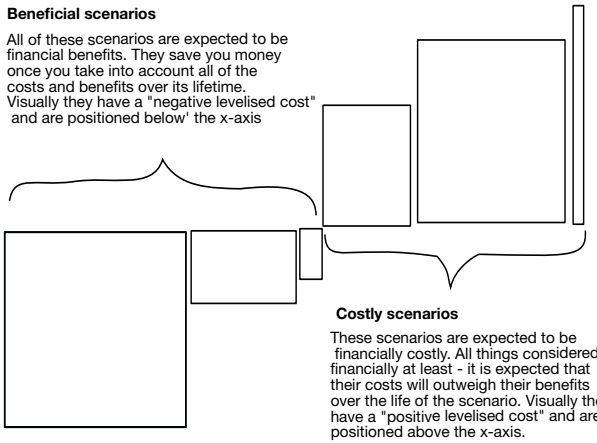


The width of a block shows the how much the scenario can contribute to a ZNET.

2. The difference between 'costly' and beneficial options

Beneficial scenarios

All of these scenarios are expected to be financial benefits. They save you money once you take into account all of the costs and benefits over its lifetime. Visually they have a "negative levelised cost" and are positioned below' the x-axis



Costly scenarios

These scenarios are expected to be financially costly. All things considered - financially at least - it is expected that their costs will outweigh their benefits over the life of the scenario. Visually they have a "positive levelised cost" and are positioned above the x-axis.

3. The blocks 'build" left to right towards achieving the ZNET target.

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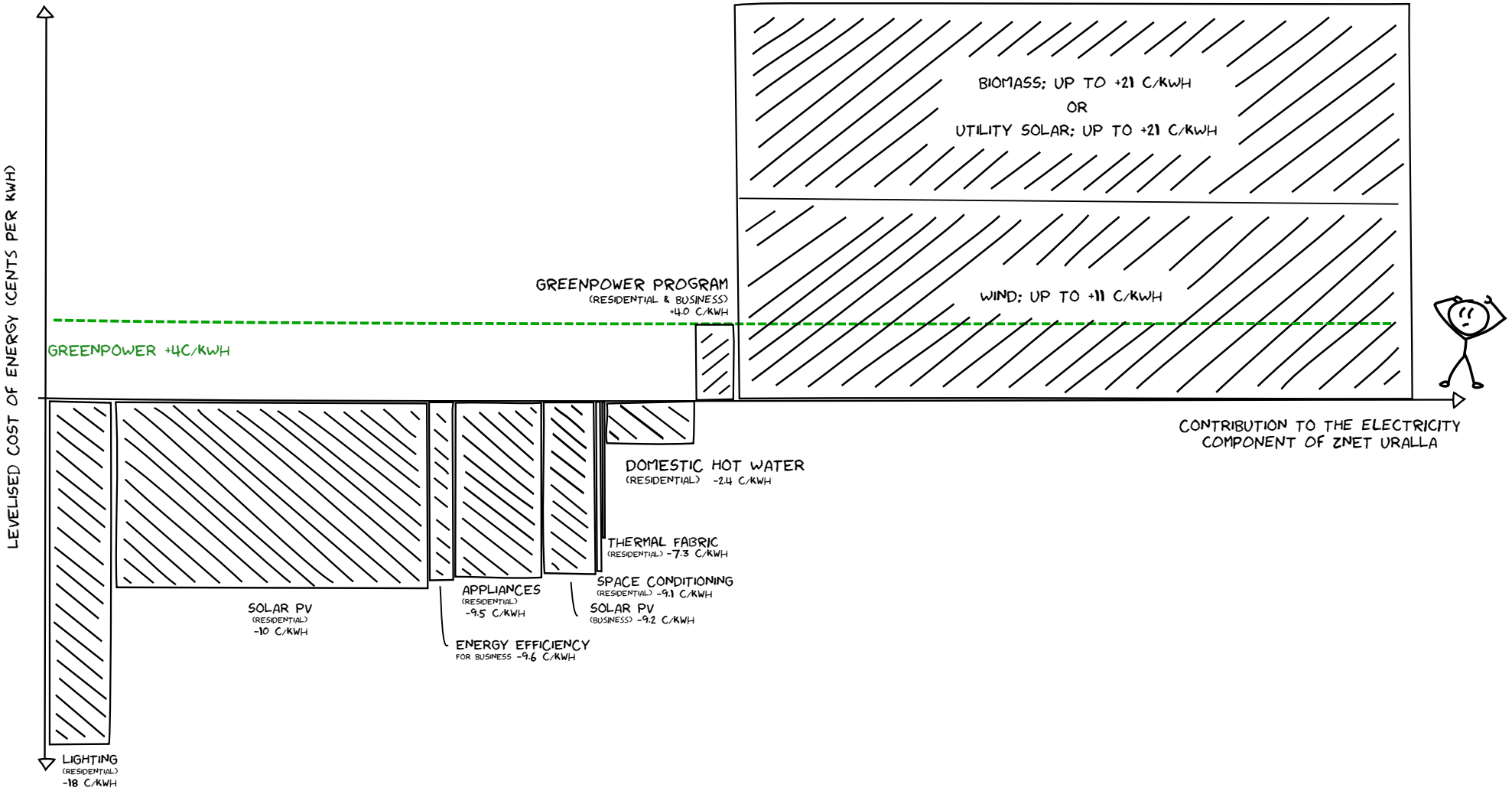
TOWARDS Z-NET: CLEAN ELECTRICITY COST CURVE

COMPARING SCENARIOS IN TERMS OF COST OF ENERGY AND CONTRIBUTION TO GETTING TO....

50%

AND UP TO 100%
OR MORE OF CLEAN ELECTRICITY IN URALLA



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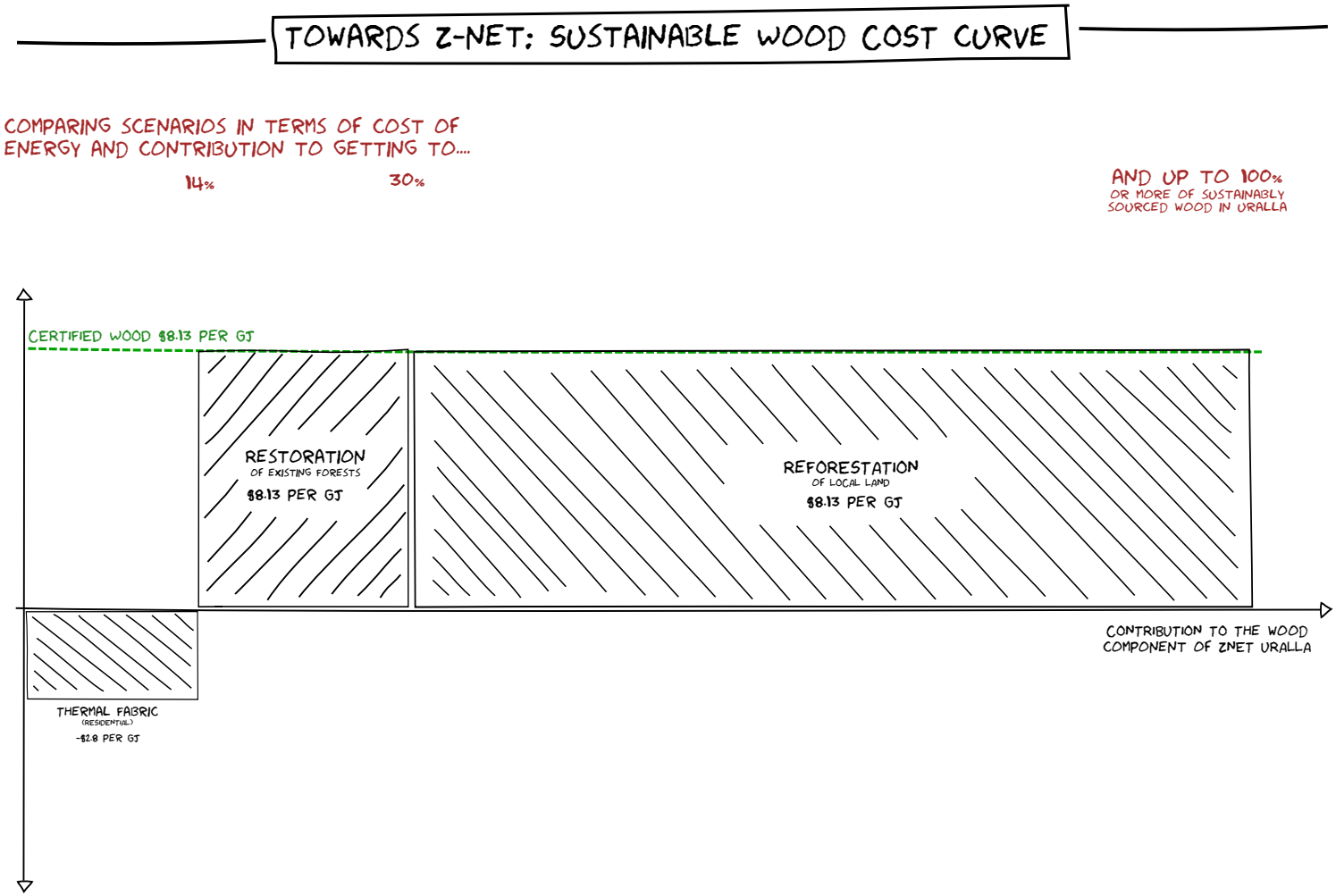
Summary of wood option evaluation

Options	Impact (% ZNET)	Business Case	Technical	Regulatory	Managing risk	Customer market	Enviro benefit	Social benefit	Economic benefit
Using less – Thermal comfort	7.0	✓✓	✓✓	✓✓✓	✓✓	✓✓	✓	✓✓✓	✓
Generating nearby – Woodland restoration and reforestation	40.8	✓	✓✓	✓✓	✓	✓	✓✓✓	✓✓	✓
Importing energy – Purchase of a third party certified firewood supply	?	✓	✓✓✓	✓✓✓	✓	✓	✓✓	✓	✗



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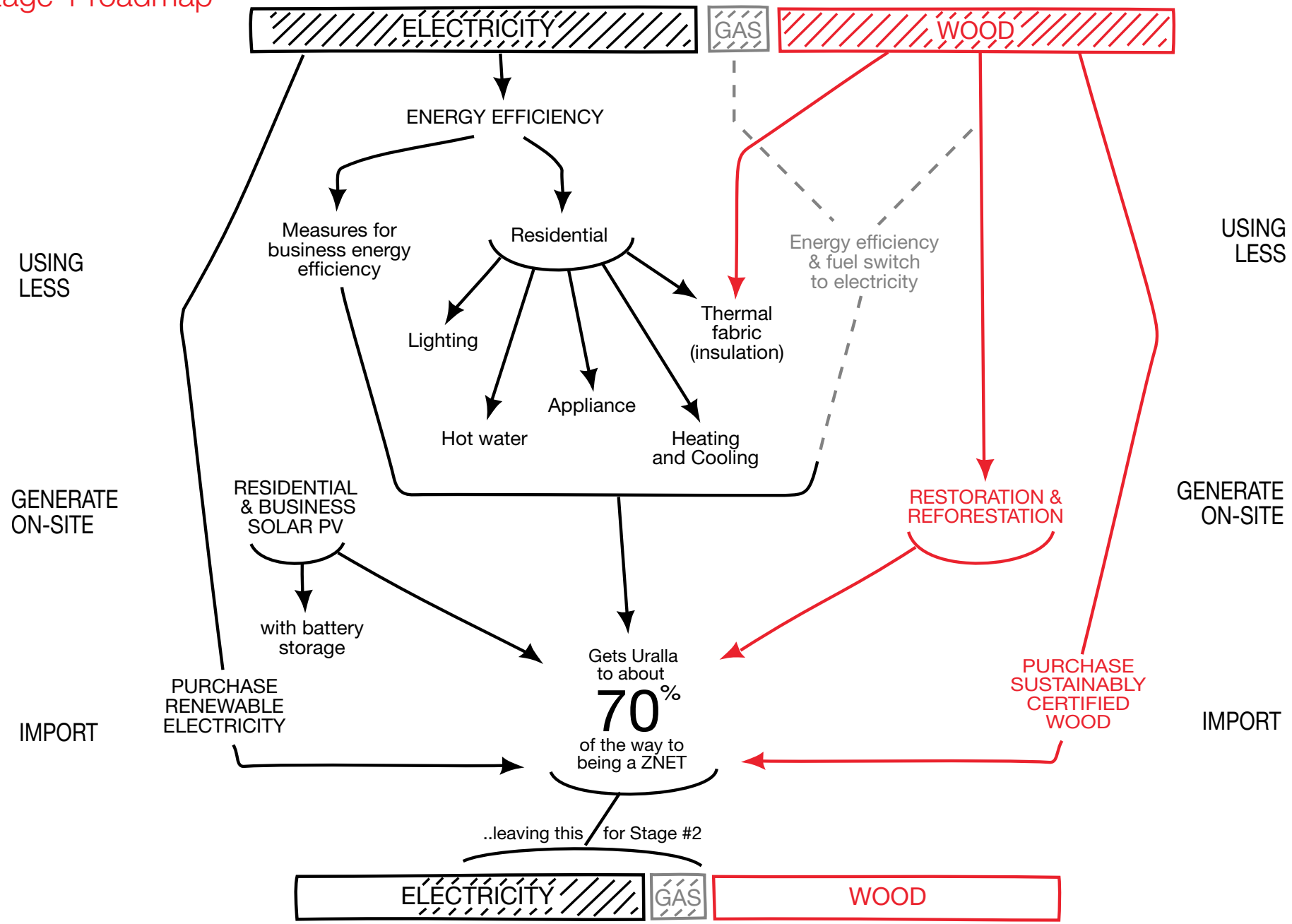
Stage 1 roadmap



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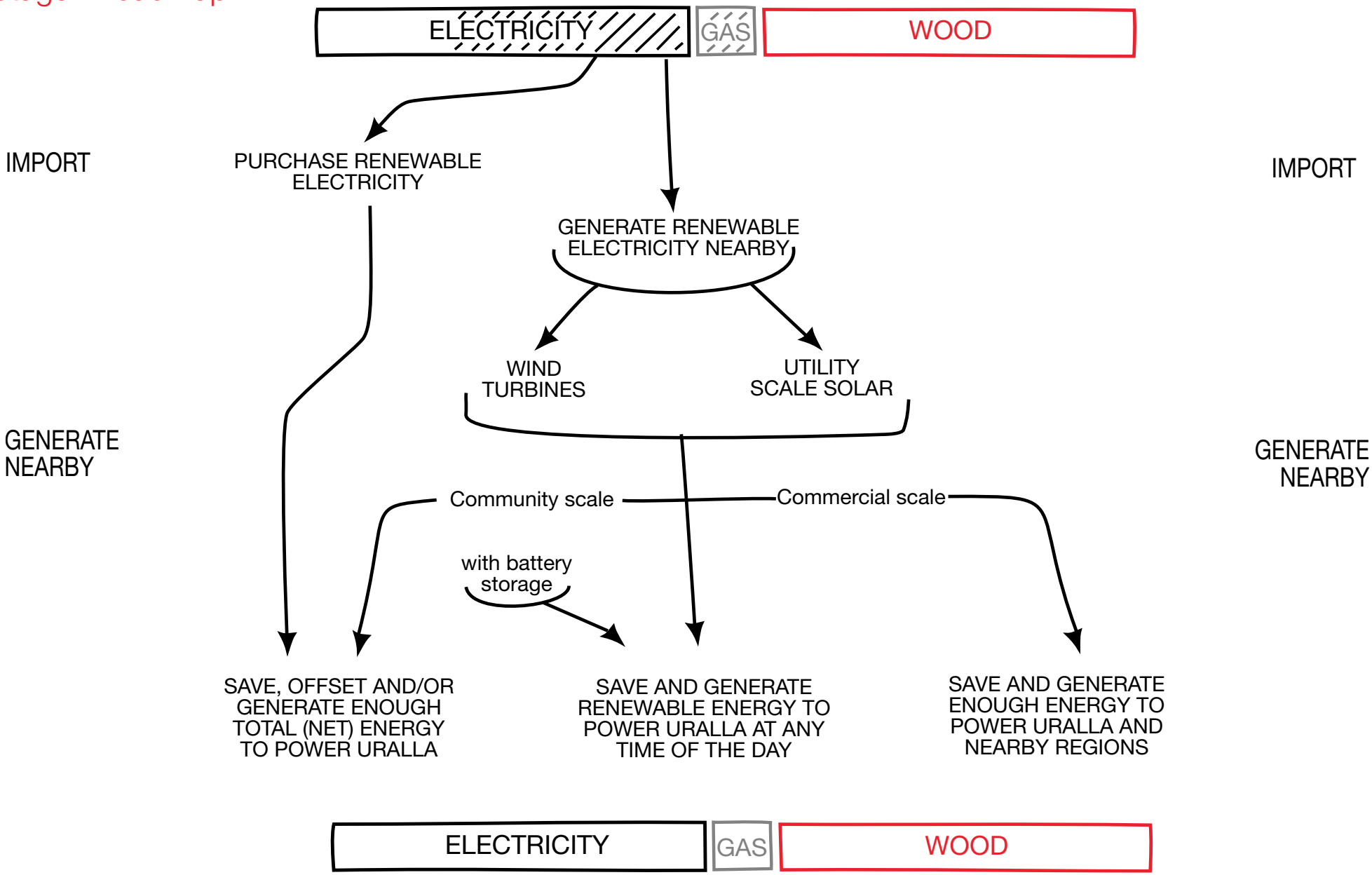
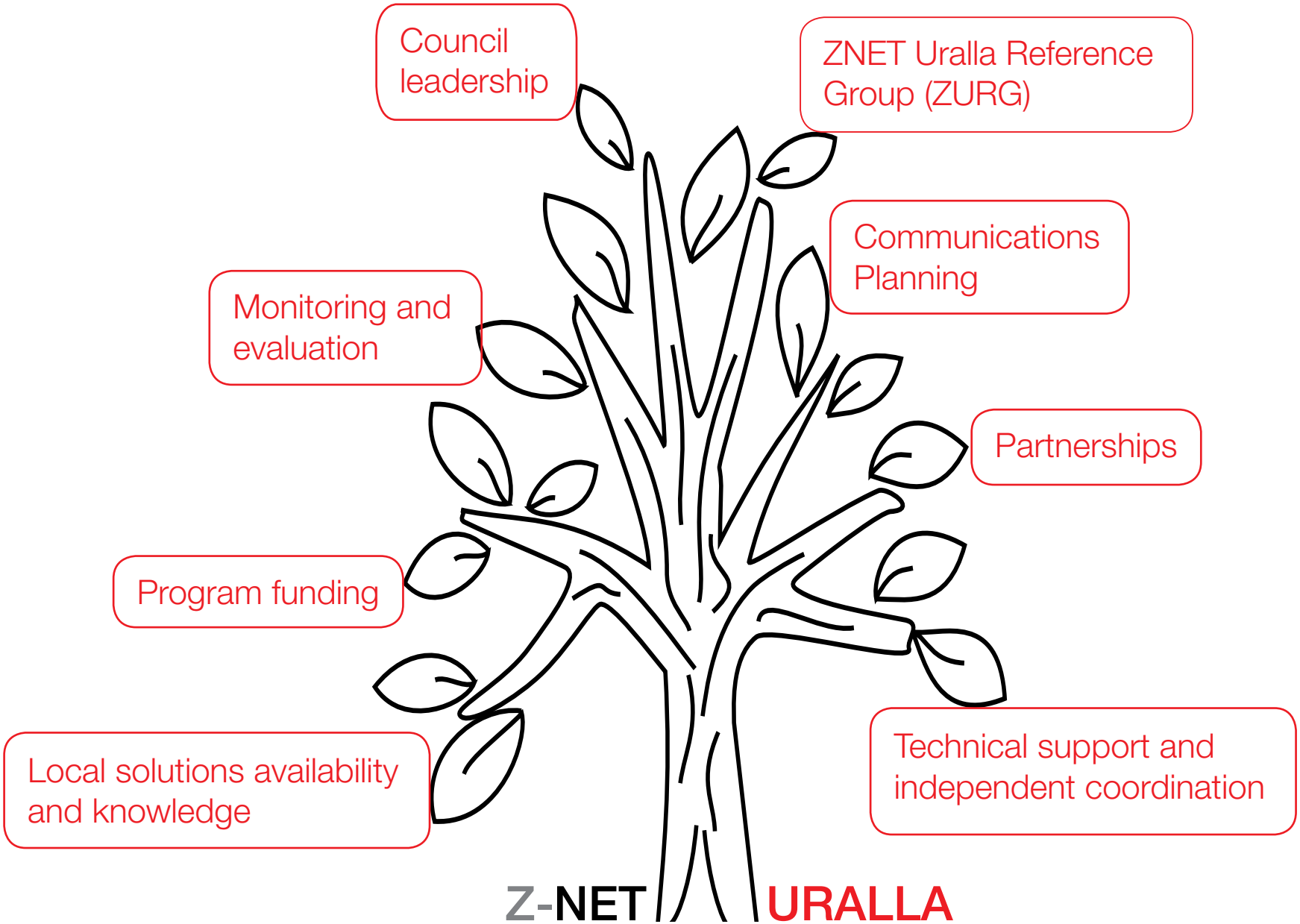
Stage 2 roadmap



Z-NET Uralla Enablers



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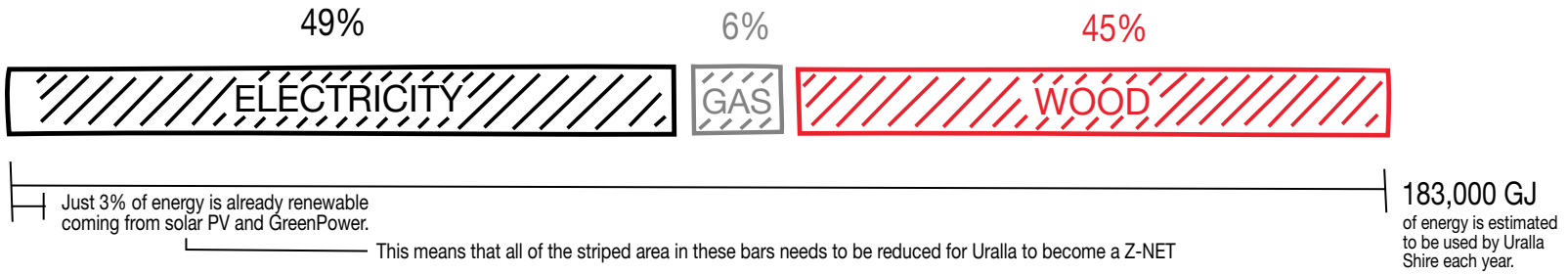
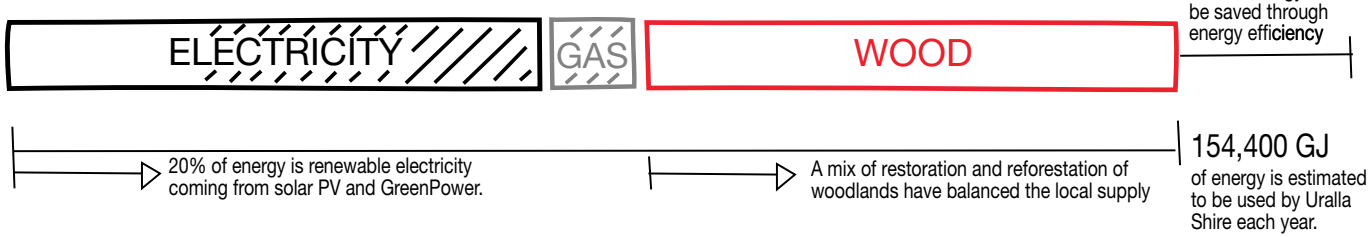
ENERGY CONSUMPTION IN URALLA TODAY



WHAT ENERGY CONSUMPTION MIGHT LOOK LIKE AFTER STAGE 1

WE MOVE TOWARD Z-NET BY REDUCING REDUCING ENERGY CONSUMED (THE WIDTH) AND REDUCING NON-RENEWABLE ENERGY (THE STRIPED SECTIONS)



WHAT ENERGY CONSUMPTION MIGHT LOOK LIKE AFTER STAGE 2

MORE ENERGY EFFICIENCY WILL REDUCE ENERGY CONSUMPTION EVEN FURTHER. HOWEVER URALLA WILL NEED TO EITHER IMPORT SOME CLEAN ELECTRICITY AND GAS, OR GENERATE MORE CLEAN ENERGY ON-SITE OR NEARBY TO GET TO BECOME A Z-NET.

URALLA'S ENERGY CONSUMPTION IS REDUCED AND SOURCED ONLY FROM RENEWABLES