Congo
Micro Grid Feasibility
Discussion Forum #2

Record of Discussion

These design briefs developed within communities will contribute to SuRF project Milestone 5.4 High level concept and design for the eight communities

CONGO PLAYGROUND PARK

11 MAY 2023

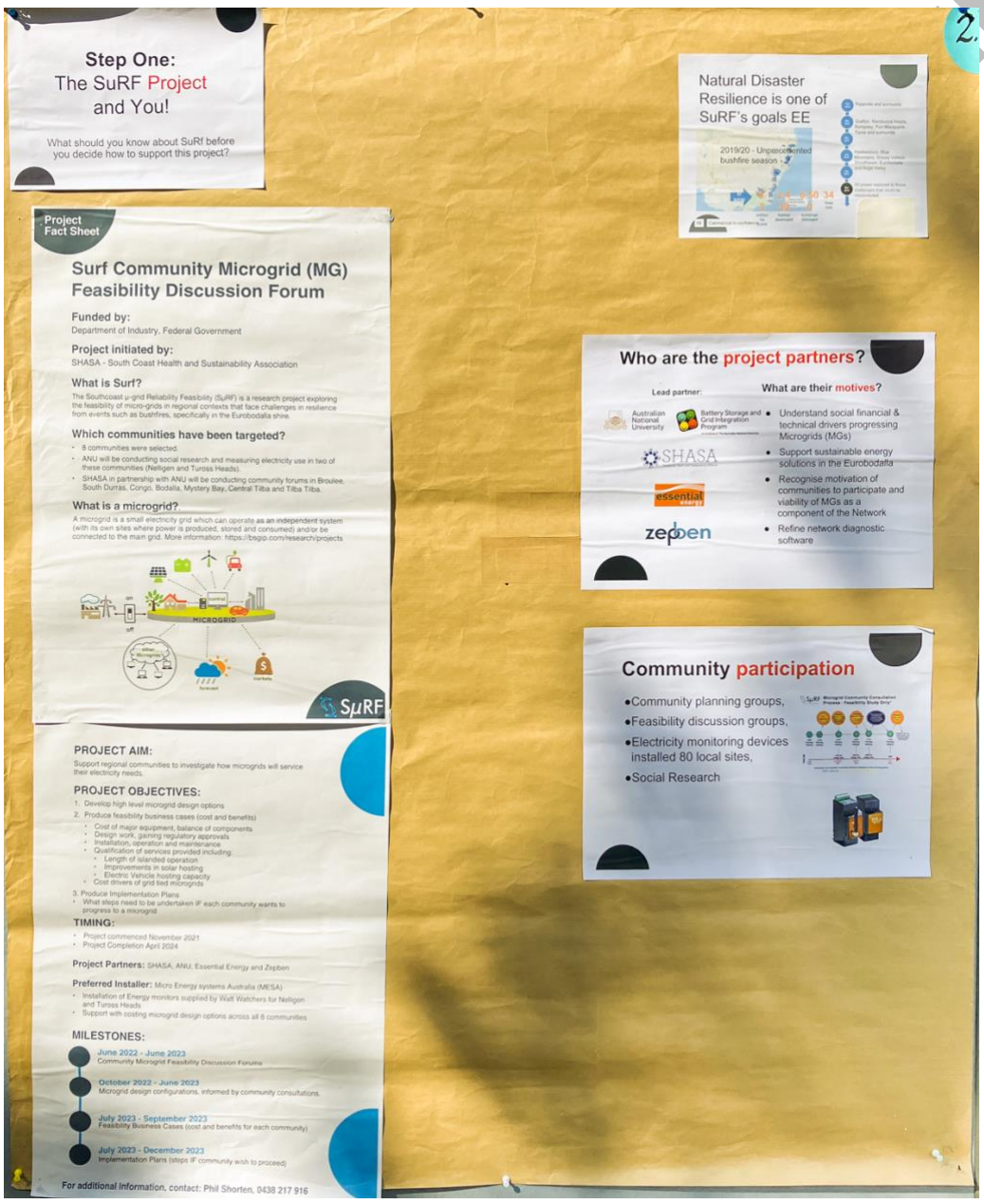
Presented by Hedda Ranson-Cooper & Bjorn Sturmberg (ANU), Warwick Crowfoot & Matt O'Neill (Essential Energy) and Matt O'Regan (ITP).
Moderated by Phil Shorten (SHASA)

Introduction and Context

The first step of the forum was to introduce the purpose and process of the forum and recognise the group participating in the discussion.

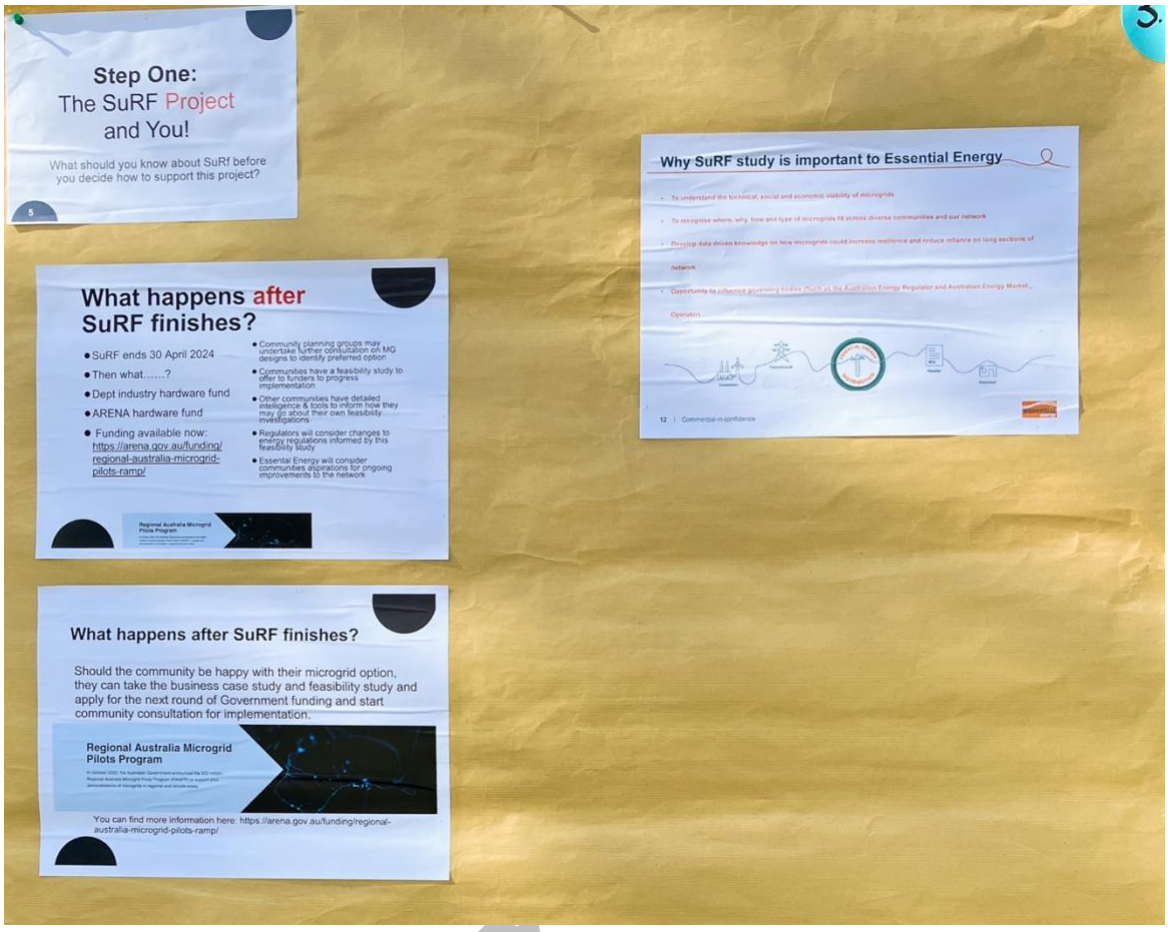
The purpose being to provide information on the context and status of the SuRF Microgrid feasibility study so that those participating leave with a deeper understanding of Microgrids and have a chance to comment on the different aspects of design that are important to them.

The context was provided by way of a series of project fact sheets about the SuRF project.



Moderator Notes…

Introduction and Context



Moderator Notes…

STEP 1

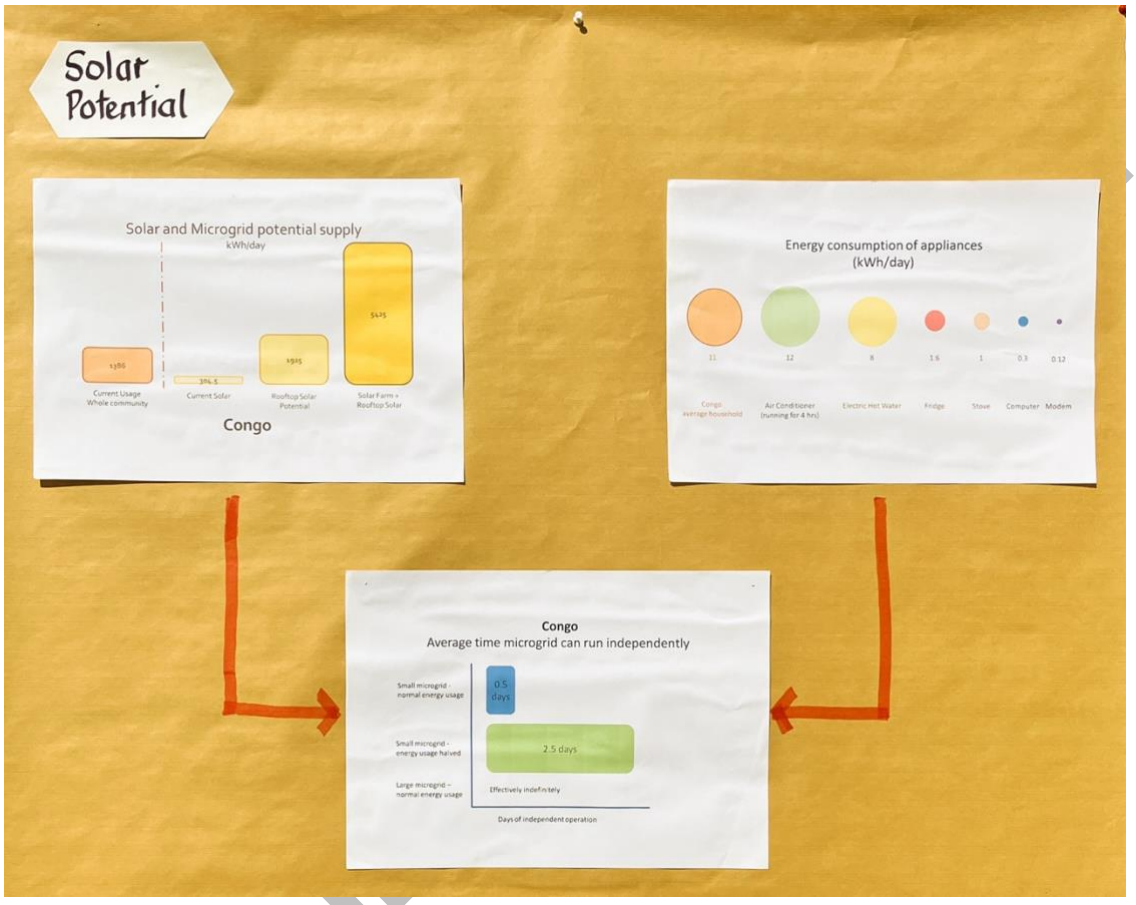
Design Objectives from Round 1 Community Discussion Group

Moderator Notes…

STEP 2

Analysis of solar potential within the community

Analysis showing the potential generation available from rooftop solar and the time the microgrid could operate in islanded mode.



Moderator Notes…

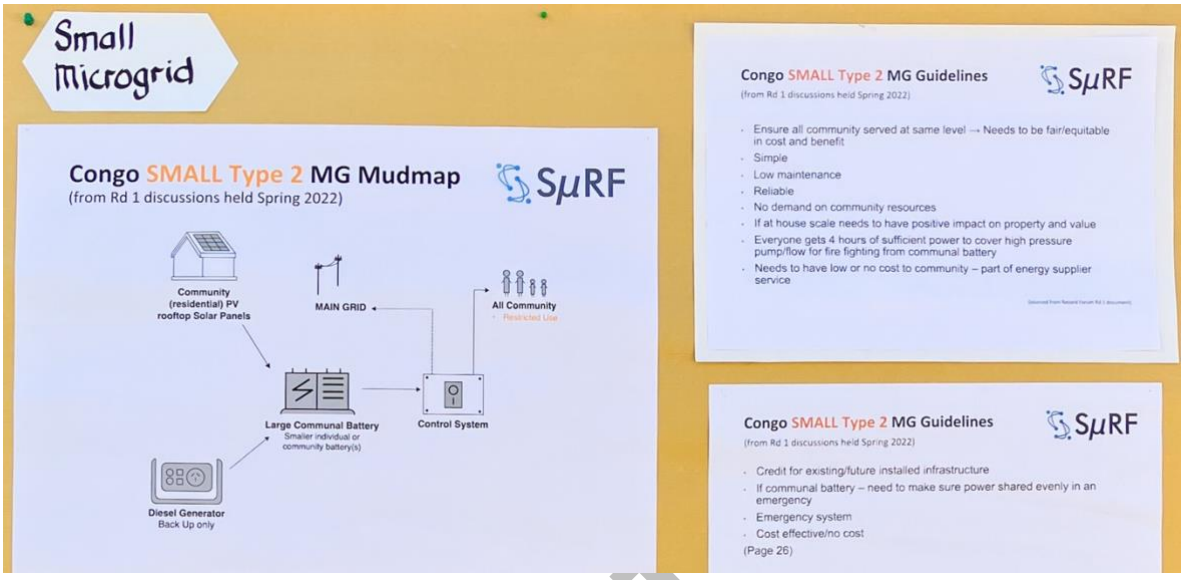
The analysis suggests that battery offered in the microgrid design by the SuRF team will provide almost half (0.5) a day of electricity in islanded (switched off from main) during a main grid outage.

If the community was to restrict their usage by 50% then the islanded time could be extended to 2.5 days.

STEP 3

Small Microgrid: Design brief offered from Rd 1 community discussion group

The design brief was informed by the outcomes from the Round 1 consultations held during the Spring of 2022.

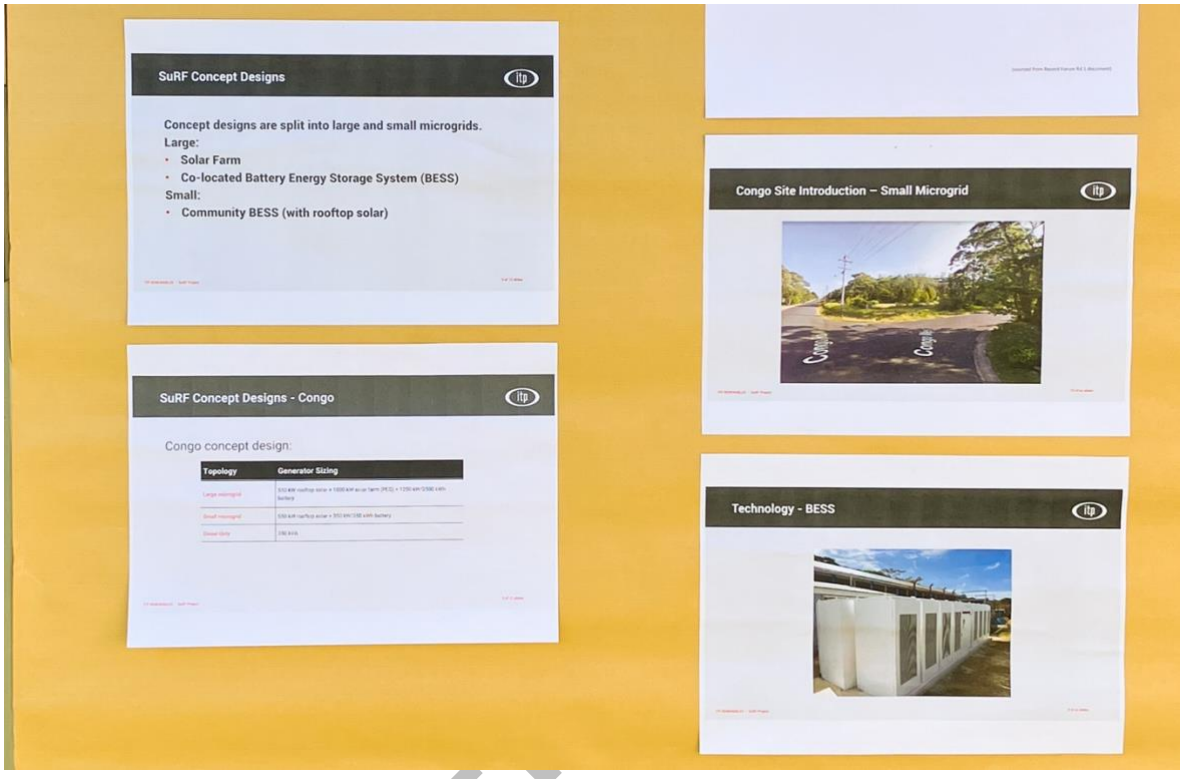


Moderator Notes…

STEP 3

Small Microgrid: High Level Design Concept

Technologies with technical specifications and costings compiled by the SuRF team for the small Microgrid were made available for comment.



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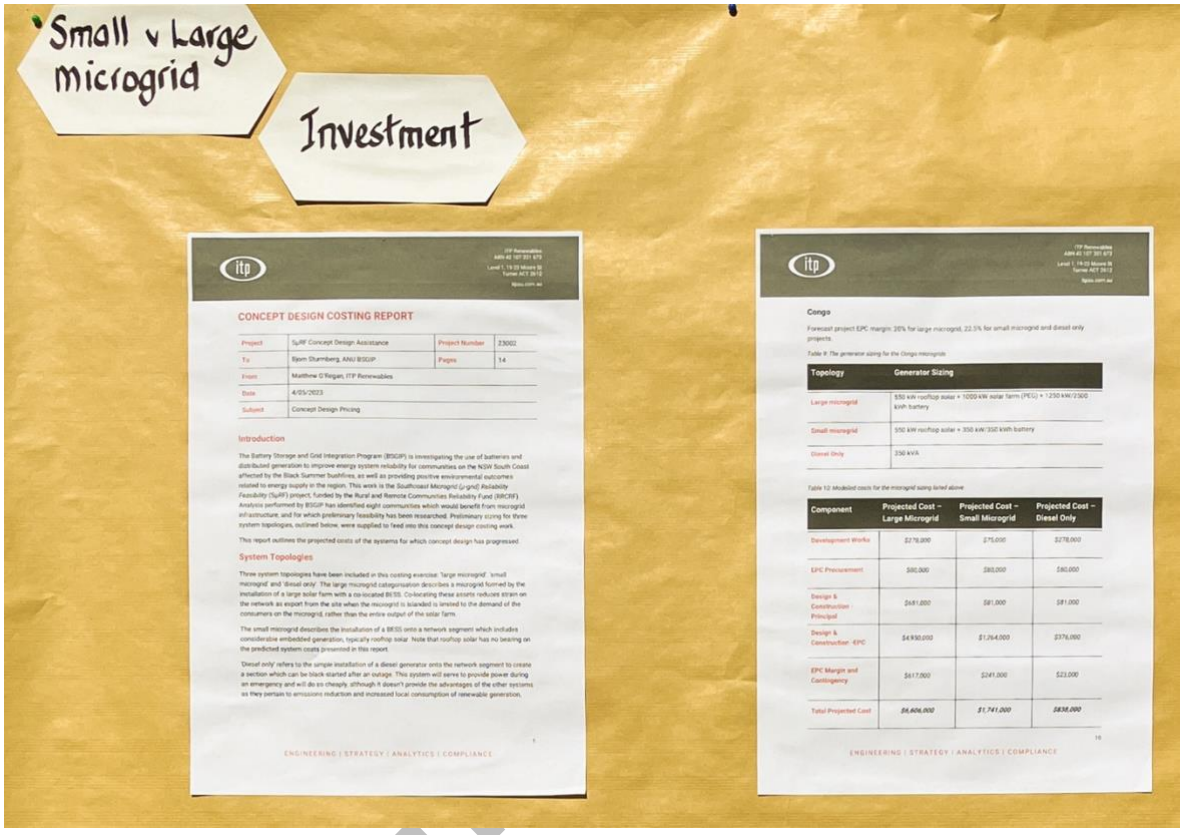
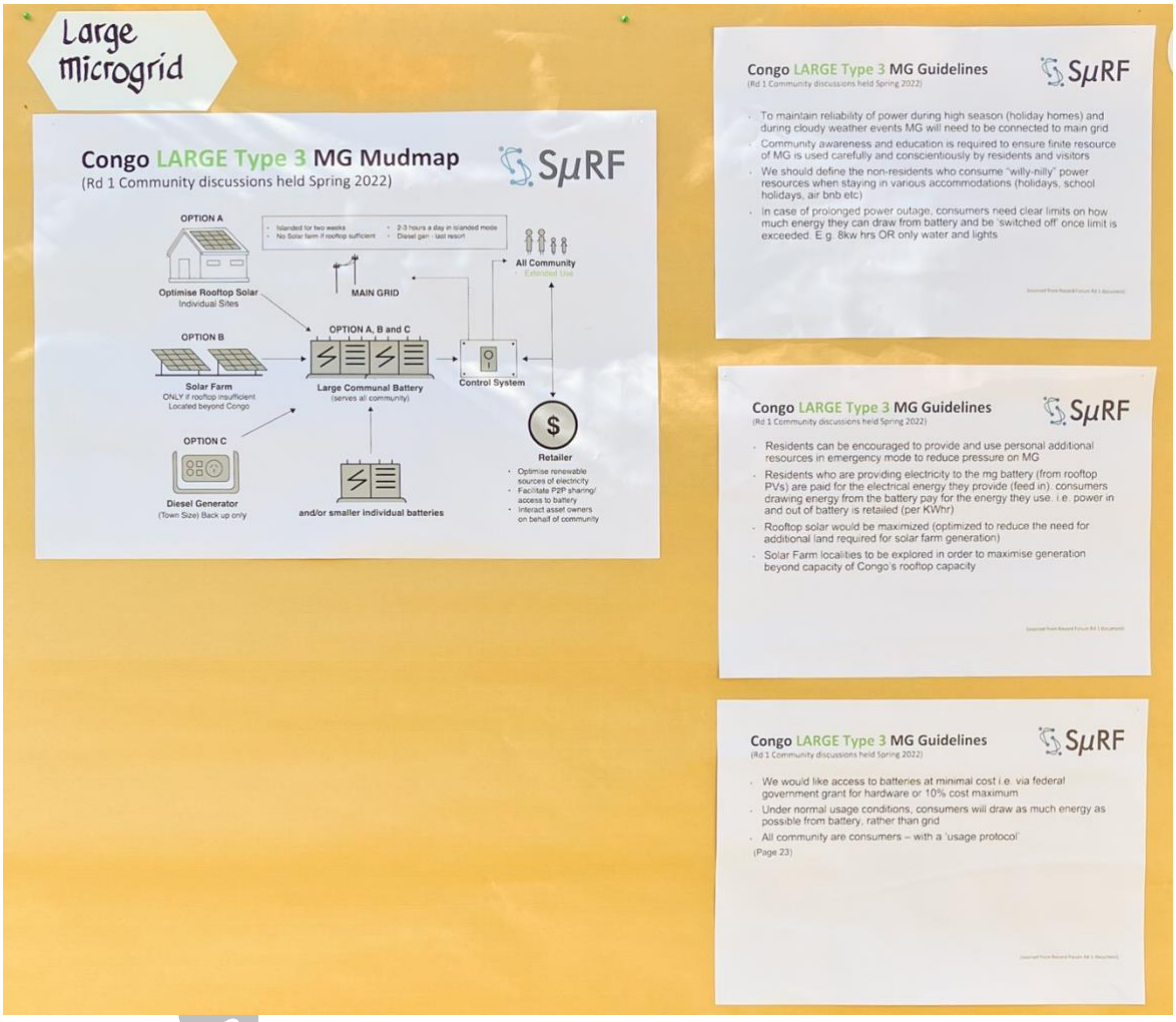


Moderator Notes…

STEP 4

Large Microgrid: Design Brief offered from Rd 1 community discussion group.

The design brief was informed by the outcomes from the Round 1 consultations held during the Spring of 2022.



Moderator Notes…

STEP 4

Large Microgrid: High Level Design Concept

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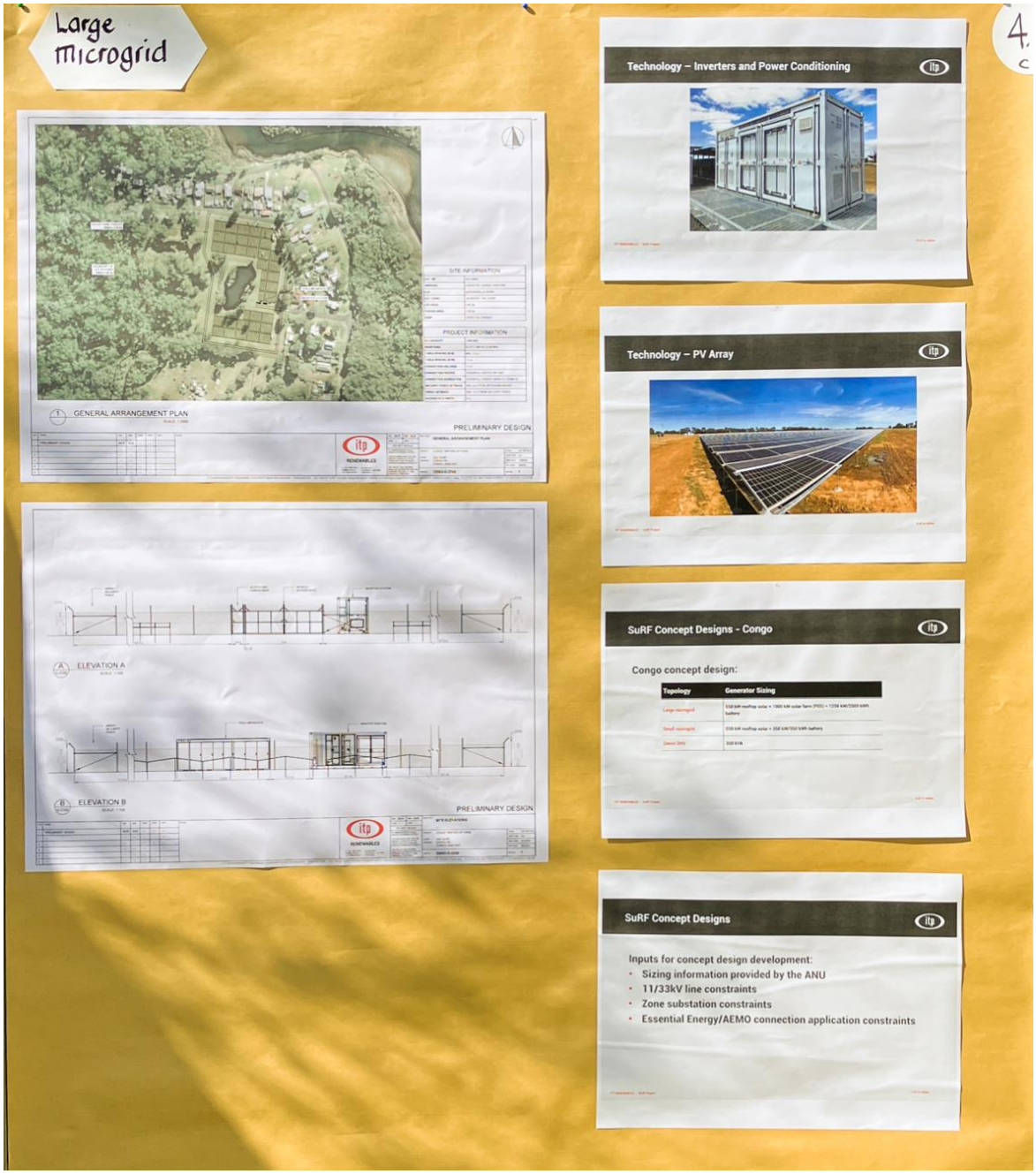

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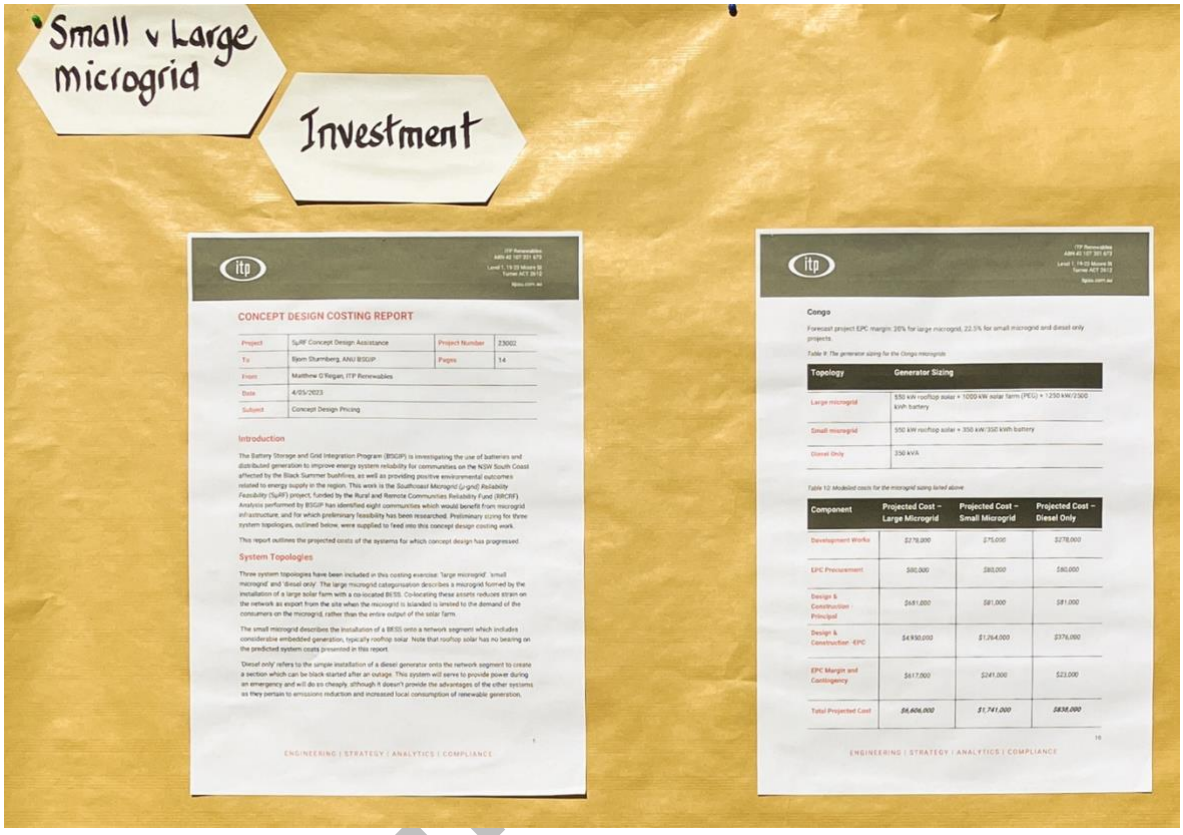
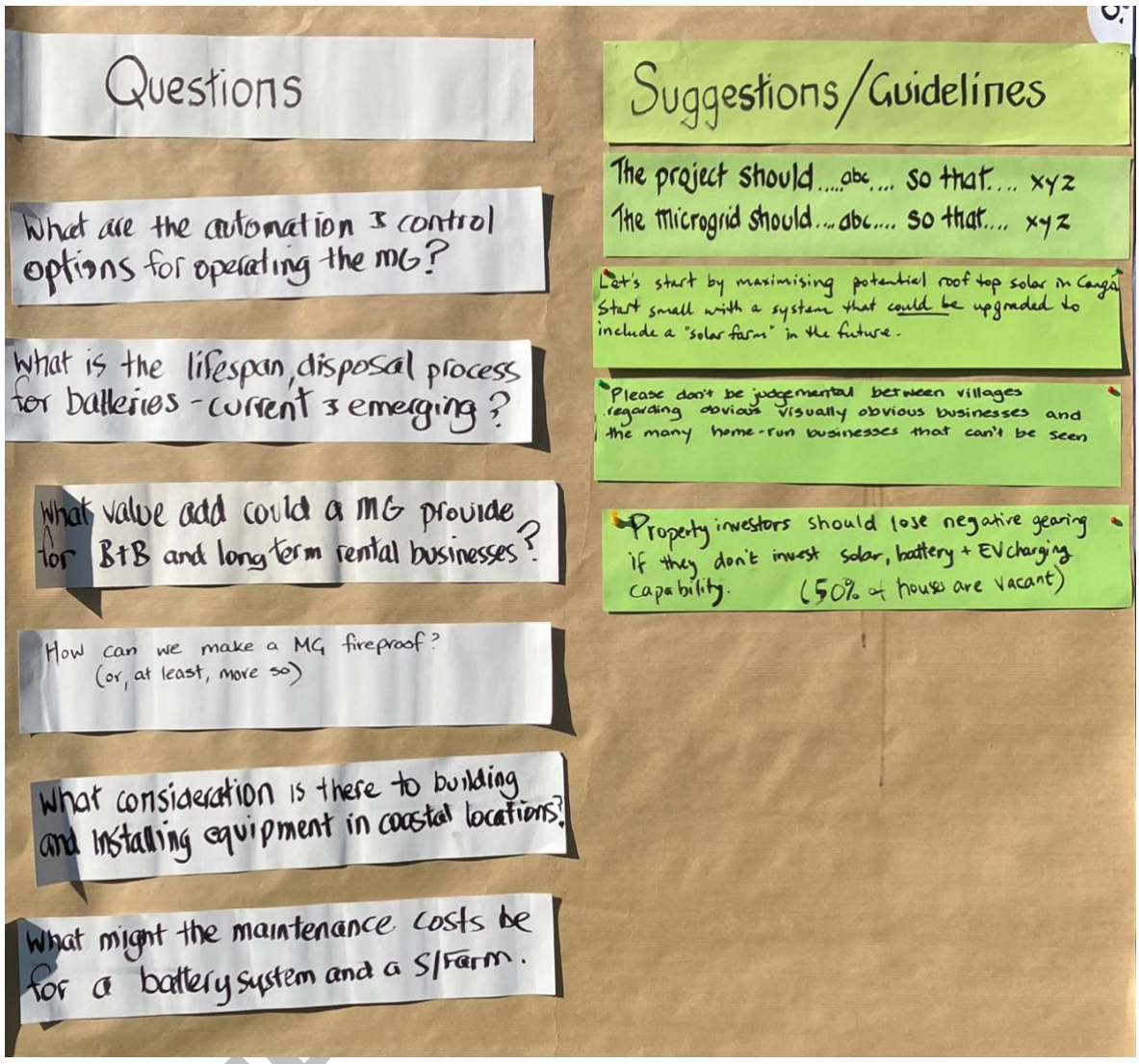


Moderator Notes…

STEP 5

Questions, Suggestions/Guidelines



Moderator Notes…

QUESTIONS

QUESTION	RESPONSE FROM SuRF Project team
1. What are the automation and control options for operating the MG?	
2. What is the lifespan disposal process for batteries? Current and emerging?	
3. What value add could a MG provide for B & B and long term rental businesses?	
4. How can we make a MG fireproof? (or, at least, more so?)	
5. What consideration is there to building and installing equipment in coastal locations?	
6. What might the maintenance costs be for a battery system and a Solar Farm?	

Moderator Notes…

SUGGESTIONS/GUIDELINES

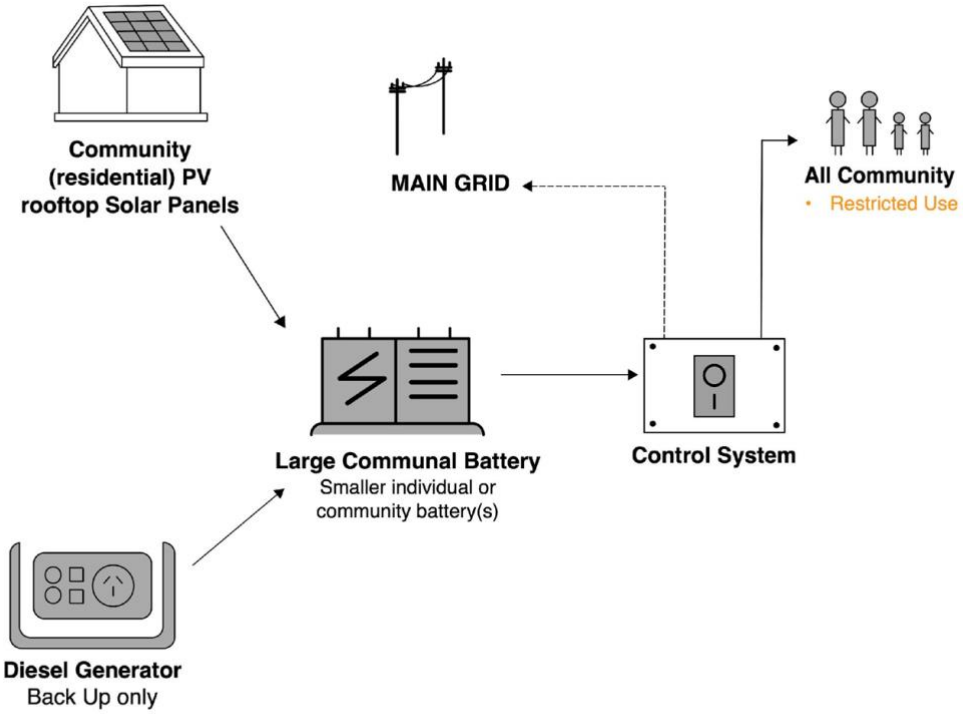
The project should … abc … so that … xyz
The microgrid should … abc … so that … xyz

DESIGN GUIDELINES	RESPONSE FROM SuRF project team
Let's start by maximizing potential rooftop solar in Congo. Start small with a system that could be upgraded to include a "solar farm" in the future.	
Property investors should lose negative gearing if they don't invest solar, battery and EV charging capability (50% of houses are vacant)	
Please don't be judgemental between villages regarding obviously visually obvious businesses and the many home-run businesses that can't be seen.	

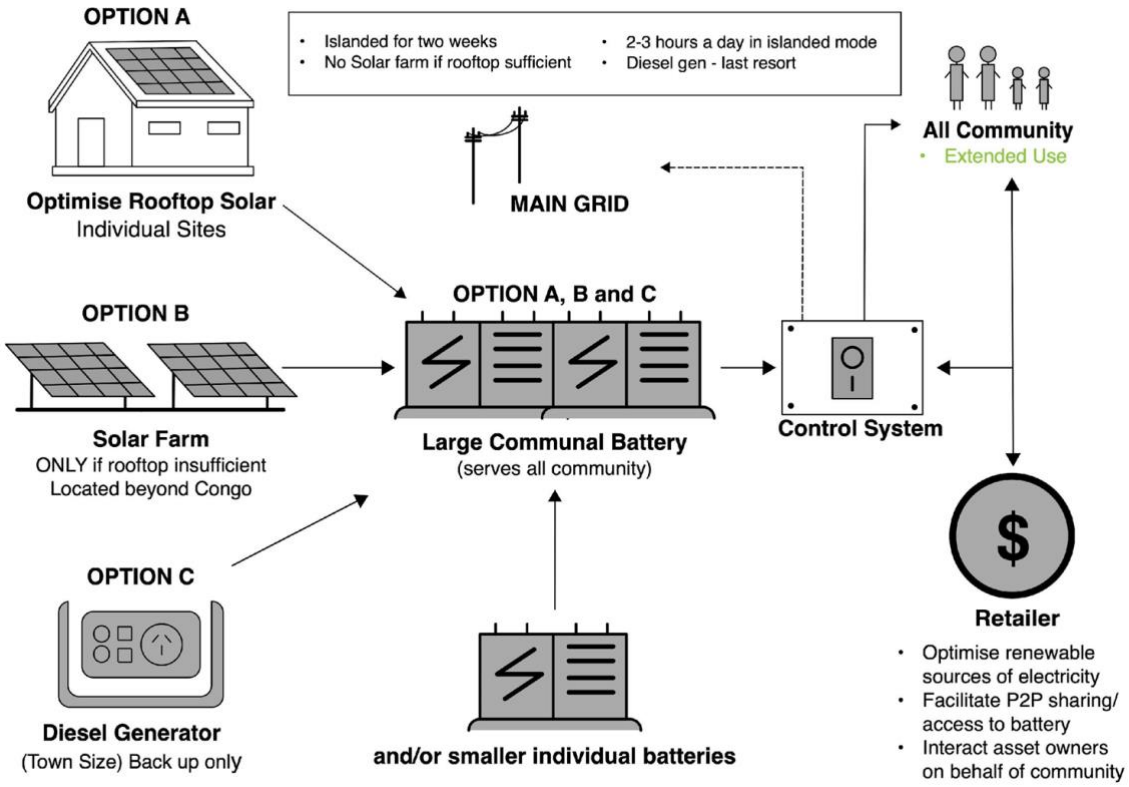
Moderator Notes…

APPENDIX

APPENDIX A: SMALL (Type 2) MG design mud map offered from Rd1



APPENDIX B: Large (Type 3) MG design mud map offered from Rd1



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The SuRF project team would like to acknowledge and thank the members of the Congo community who gave their time, provided their insights and support for this important Microgrid feasibility work

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Mandy Nott
Jill Turner
Lyn Smith
Jennifer Abel
Amadis Lachek
Kay Fry
Doug Fry
Congo Community Association

The SuRF project team acknowledges that we meet at various locations across the traditional lands of the Yuin People. We pay our respects to the Elders, past, present and future.

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