

SOCIAL SUSTAINABILITY IN SOUTHERN COOKS SOLAR MINI-GRIDS



Chris Service, Infratec, Rarotonga 2019

About Infratec

- Mission: advance sustainable development in the Pacific and ASEAN regions by providing bespoke renewable energy solutions and local capability development to island communities.
- Leading renewable energy EPC and project developer in the Pacific.
- Wholly owned subsidiary of Alpine Energy, a distribution lines company in NZ.
- Specialist in bespoke and structural solutions for island energy supply:
 - Solar PV, Battery storage, Microgrids & HV networks;
 - Local employment, training & capacity building;
 - Commercial and Utility Scale.
- Recognition:
 - 2018: Best Community Project at the Sustainable Energy Association of NZ (SEANZ).
 - 2018: Finalist for Inspiring Preference for New Zealand Award at the New Zealand International Business Awards.
 - 2016: Champion Canterbury Business Awards.



Where we work

- Infratec works in island nations, where its expertise and holistic approach brings added value to our customers.
- Our core markets are the Pacific Islands and New Zealand, with a 5 year track record of delivered projects.
- Secondary markets include ASEAN region and Australia.
- Projects delivered / under delivery in:
 - Afghanistan
 - Cook Islands
 - Tonga
 - Nauru
 - Federated States of Micronesia
 - Marshall Islands
 - Palau
 - Kiribati
 - New Zealand
 - Papua New Guinea
 - Tuvalu
 - Indonesia

Infratec Project Portfolio



Project overview

➤ Context

- RE Targets: CI Govt. 100% renewable energy target.
Phase 1 – (smaller) outer islands;
- Social: Depopulation, limited employment opportunities

➤ Objective

~100% solar micro-grids to 4 islands in the Southern Group: Atiu, Mangaia, Mauke and Mitiaro

➤ Baseline

Diesel generators operating ~12 hours/day.

➤ Solution

- 1.3 MWp of solar and 7.3 MWh of storage
- MV & LV networks upgrades on Mauke and Mitiaro

➤ Programme

2017-2018

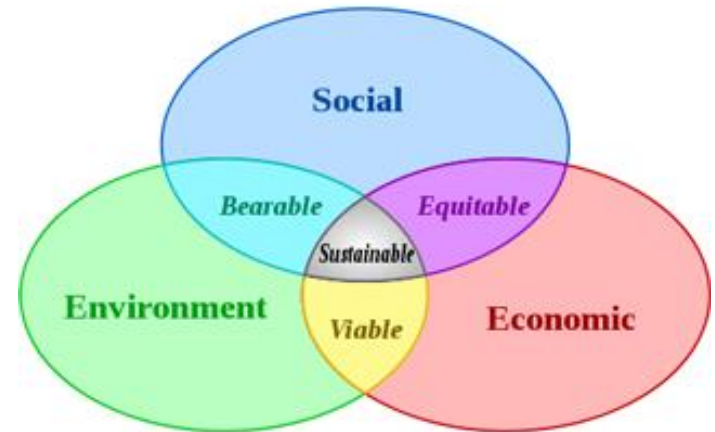
➤ Expected Results

1. Diesel savings of ~360,000 litres/ year
2. CO2 savings of ~960 tonnes/year
3. Increase availability and resilience of electricity supply – 24 hours

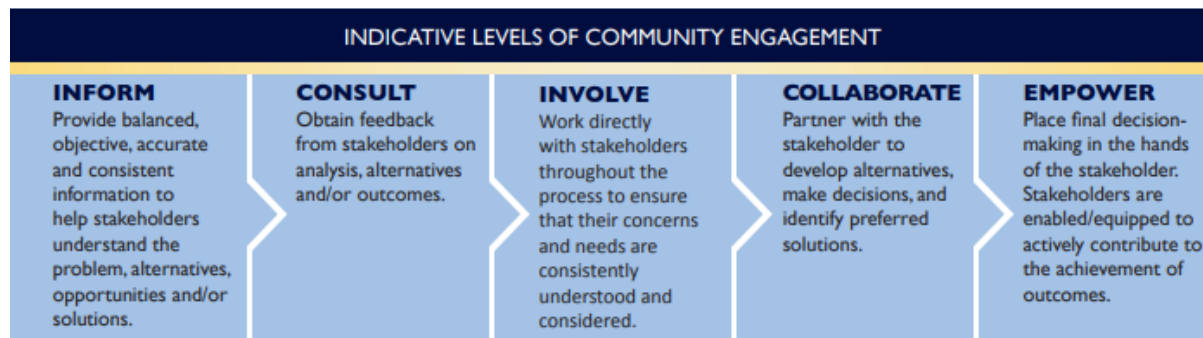


Our approach to the project

- Infratec develops its project design and implementation according to the 3 pillars of sustainability.
- The first two: Environmental and Economic Sustainability are often achieved by project design. The third, Social, is often overlooked and is critical in small, remote communities.
- Our approach to Social Sustainability is to implement a **Community Engagement** approach, as per the 5 stages:



3 pillars of sustainability



Source: *Guide To Community Engagement For Power Projects In Kenya, Power Africa 2018*

What is Community Engagement?

- A means to foster mutually beneficial and sustainable relationships between the developer and the community, with continuous feedback loops.
- Key principles include:
 - Proactive Consultation & Feedback loops
 - Collaboration & shared purpose
 - Inclusive participation
 - Learning and accountability
 - Cultural appropriateness
 - Gender equality / female empowerment
 - Integrity, Transparency
 - Sustained engagement



What this means in practice....

1. INFORM

- Ground work completed by CI Govt. (REDD), local MPS and community leaders
- Meeting with community leaders (Ariki, IAs, Priests) – project overview & approach, understanding local response and needs
- All stakeholder are interested in a Joint approach to the project: Infratec/ Cooks govt/ community.

2. CONSULT

- Worked with CI Govt (REDD, Ministry of Health) and local leaders regarding cultural norms and best engagement methods
- Interviews with local leaders and stakeholders – setting expectations & feedback



What this means in practice....

3. INVOLVE

- Employed Community Engagement Manager to spearhead design and implementation.
- Identified local workers with skills and/or potential
- Focused on employing women.
- Ground-breaking ceremonies with community & local leaders.



What this means in practice....

4. COLLABORATE

- Employing local workers
- Supporting youth conference (financial & staff) in Mauke
- Supporting genset to Mitiaro during Island Games
- Interchange of local staff between islands



What this means in practice....

5. EMPOWER

- First aid training with women & children in partnership with CI Red Cross
- Training on worksite HSE and setting HSE standards
- Training and skills development in construction.
- Active role in the development of their and other islands



- Employed 40 local people employed throughout the project
- 25% of local employees were women
- Traditions and local commitments respected
- Community buy-in and ownership enhanced
- Experience and knowledge of system operation kept on island
- Community Engagement viewed as critical success factor to the project
- Several local employees have gone on to continue trade careers
- More reliable electricity supply (24 hours). Opportunities for economic activities actively being explored (Mauke fish export)



Recommendations / learnings

Learnings

- Plan to work around local routines & responsibilities (family, religious and community)
- Build in contingency (time) for ad-hoc community events
- Set firm expectations and division of responsibilities – what is in & out of scope
- Ensure sub-contractors are just as sensitive to cultural and social setting as core team



Recommendations for project developers:

- Treat community engagement as a budget line → resource for it!
- See community engagement as an effective risk mitigation strategy
- Take the time to get the right people for the right job





INFRATEC

POWERFUL SOLUTIONS FOR PACIFIC COMMUNITIES.

THANK YOU!



INFRATEC