Lessons Learnt Report

RayGen Solar Power Plant Demonstration Project

Milestone 1

This Project received funding from the Australian Renewable Energy Agency (ARENA) as part of ARENA's Advancing Renewables Program.

Lessons Learnt Report: COVID-19 impacts on project objectives

Project Name: *RayGen's Solar Power Plant – Phase One*

Knowledge Category:	Logistical
Knowledge Type:	Risk Management
Technology Type:	Storage
State/Territory:	Victoria

Key learning

The COVID-19 pandemic and global stimulus has had wide-reaching impacts on project planning and delivery. Projects are facing shipping and transport delays, transport and material cost volatility, equipment supply shortages, and extended supply lead times. While complex and challenging to navigate, RayGen has found that these challenges can be ameliorated with the right partners. RayGen has developed key freight forwarder relationships, as well as established a permanent in-country logistics and supply quality management centre in China to support ongoing supply efforts.

Implications for future projects

The unforeseen circumstances created by COVID-19 have highlighted the importance of a detailed project plan with strategic flexibility and contingencies. This project and future projects require an overall project plan with comprehensive end-to-end procurement and delivery management plans, and contingency for unforeseen circumstances. RayGen's experience developing a project during the global COVID-19 outbreak has been a lesson that, when practicable, maximising time allocation for delivery of equipment is always beneficial.

Knowledge gap

RayGen identified, prior to COVID-19, that the lack of presence in key supply regions was a gap in our capabilities. For previous projects, RayGen had taken an 'as-needed' approach to in-region management of logistics and deliveries, supported by occasional visits from RayGen's Australian engineering team. This approach had its short-comings. RayGen established a permanent presence in China with a staffed office, as well as dedicated freight forwarders. This approach has been pivotal to reducing the impact on the supply chain from the pandemic.

Background

Objectives or project requirements

RayGen has designed Solar Power Plant One (SPP1) for delivery in 2021/2. The purpose of the project is to realise a first of type large-scale, low cost and low risk solar-plus-storage technology for deployment in Australia and internationally. SPP1 is composed of two proprietary technologies: PV Ultra and Thermal Hydro. PV Ultra is developed in Australia by RayGen, and Thermal Hydro is a combination of proven, off-the-shelf components. RayGen engages local and international suppliers for both PV Ultra and Thermal Hydro technologies.

Process undertaken

RayGen worked with third party supply chain partners previously in China and have found that a local RayGen presence is more efficient.

Lessons Learnt Report: Stakeholder Engagement and Consultation

Project Name: *RayGen's Solar Power Plant – Phase One*

Knowledge Category:	Logistical
Knowledge Type:	Community Engagement
Technology Type:	Storage
State/Territory:	Victoria

Key learning

Due to delays in the planning process, RayGen had a longer gap in community engagement than ideal, and so lost some favour with local community groups. This meant that some members of the community, as well as some construction contractors, were less prepared or able to support the project when it began construction.

Implications for future projects

Community engagement planning needs to manage unforeseen delays in project milestones by the inclusion of low impact but routine community engagements. This might include local newspaper articles, direct letter drops, or additional community consultation evenings.

Knowledge gap

Managing stakeholder engagement when delays occur in the planning process.

Background

Objectives or project requirements

RayGen has designed Solar Power Plant One (SPP1) for delivery in 2021/2. The purpose of the project is to realise a first of type large-scale, low cost and low risk solar-plus-storage technology for deployment in Australia and internationally.

Process undertaken

RayGen established a comprehensive Community Engagement plan. This plan provides opportunity for local community input and review of project activities as well as opportunities for involvement in construction and delivery. This was endorsed by the local council and ARENA as a part of the project EMP and funding support.