Simon Ash
Chief Operating Officer
Winton

By email: s 9(2)(a)

Subject: Sunfield Masterplanned Community Letter of Feasibility

Lightforce is writing to provide you with a high-level overview of the proposed solar solution for the Sunfield masterplanned community and to affirm Lightforce Solar's capability to implement this initiative.

The Sunfield solar project aims to integrate solar power across both residential and commercial sectors of Sunfield. This comprehensive initiative involves equipping around 4,000 residential homes with solar power capacities ranging from 6.2 kW to 6.9 kW each. Additionally, commercial sites covering approximately 460,000 sqm will undergo solar installations, spanning various sectors such as commercial, retail, healthcare, aged care, convenience, education, industrial, and electric, public transportation.

The project is projected to span 10 to 12 years, during which solar panels will be strategically deployed on all residential homes, commercial buildings, carports, e-Bike, and bus stops. Incorporating the Sunfield solar project into Sunfield will improve the communities energy resilience and reduce the carbon impact.

Overview of Lightforce Proposed Sunfield Solar Solution:

Lightforce Solar proposes a comprehensive solar solution for Sunfield integrating solar panels on residential homes, commercial buildings, carports, and transportation stops to improve community energy resilience and reduce the carbon impact. Lightforce Solar's solution incorporates container storage utility scale batteries at each community hub. Refer to Appendix A for the breakdown of scope. The objective is to reduce the carbon impact at Sunfield, while and increasing electricity resilience. Lightforce Solar has completed a proof of concept, however due to developments in the technology related to solar and batteries the most suitable technology/product to be used will be determined closer to the build date.

Detailed below are the large-scale solar development which Lightforce has been engaged on:

- Kainga Ora Highbury Triangle –– 236 apartments across 5 buildings,
- James Kirkpatrick Group –– 750kWp,
- Claymark Holdings –– 1,188kWp, and
- Takaka Solar Farm Installation –– 1,400kWp (with an additional second phase in progress).

Lightforce Resources and Team:

- 12 installation teams consisting of 56 installers, providing ample capacity to provide cover as required,
- Existing sub-contractor relationships to support our installation team on delivery,
- Ability to relocate, installers across the country as required, and
- Relationships with consultants around regulatory and engineering design.

Proposed key Personnel, Description of Role and Details of Previous Experience:

Proposed key personnel	Description of Role	Overview of Previous Experience
James Fulton	GM - Operations	Qualified electrician (EWRB – E264968) 33+ years electrical experience Senior project manager 15 years in solar including own firm in the UK
Jamie Smith	National Installation Manager	Qualified Electrician (EWRB - E146732) 8 years solar installation experience Advanced heights certification EWP license Certified heights equipment assessor

Heath Conklin	Commercial Project Manager	Qualified Electrician (EWRB – E264646) 17 years Electrical experience including High voltage Managed large installation and commissioning projects for ABB EWP license
Jerry Mar	Operations Manager	Electrical Apprentice – EW149044 6 years solar installation experience. Roofing specialist who is near completion of electrical apprenticeship
Ivan Yang	Lead Engineer	BEng/ MEng (Electrical) Experience designing solar projects to 20MW 12 years solar engineering experience

Supplier arrangements for materials and additional plant:

- Strong supply arrangements with manufacturers for direct supply. Stock at our local hubs throughout the country. On confirmation of an installation date these will be set aside for the project.
- Secondary supply is available locally in the unlikely event that there was a supply chain event.
- Location and availability of proposed plant.
- Lightforce has national agreements for access equipment, and ability to plan timelines to work alongside building contractors to reduce scaffolding requirements/access equipment.
- Lightforce boasts a team of engineers who will oversee the initial design, collaborating with consultants to address the design and regulatory aspects of embedded networks. Castalia is our recommended partner for regulatory and business model/design expertise, supplemented by input from electrical engineering experts such as BECA or WSP, as required.

Lightforce Solar after thorough review and consideration of various factors including technological advancements, environmental implications, energy consumption patterns, regulatory requirements, and potential construction challenges are confident that the proposed Sunfield Solar solution is feasible. Our commitment to leveraging innovative solar technologies, adhering to regulatory standards, and implementing effective mitigation measures ensures that the Sunfield Solar solution can be successfully implemented to enhance energy resilience and sustainability within the Sunfield development.

We look forward to embarking on this journey with you towards a greener and more sustainable future.

Warm regards,

Lightforce Solar

References:

https://www.ea.govt.nz/documents/292/Guidelines_for_metering_reconciliation_and_registry_arrangements_for_secondary_7EqJIUb.pdf

https://www.ea.govt.nz/documents/4659/FULL_MERGED_CODE_-_CRP_2024_AMENDMENTS.pdf

https://www.mbie.govt.nz/building-and-energy/energy-and-natural-resources/energy-generation-and-markets/electricity-market/electricity-industry-regulatory-framework/electricity-industry-regulations/

Appendix A.

Scope of work:

Winton and Lightforce has reviewed different solutions to deliver low carbon, energy solutions for Sunfield development. A grid connected solar network is the preferred solution, overall improving electricity resilience, and reducing overall electricity cost for the end user. The network will be developed in accordance with guidelines set by the Electricity Authority under the Model Use-of-System Agreement. Owners of Secondary Networks in New Zealand are not exempt from obligations under the Electricity Industry Act 2010 governing legislation, or New Zealand's version of the NER, The Electricity Industry Participation Code. Lightforce Solar recommends Castalia is recruited to support the delivery from a regulatory standing.

Statement of Feasibility: We hereby affirm that the proposed solar solution for Sunfield is entirely feasible and can be effectively rolled out and implemented. Our expertise in solar technology, coupled with our understanding of evolving market trends, positions us as well-equipped to undertake this project with confidence.

Specific Solar Technology Preferences: Winton's preferences for the Sunfield Solar solution includes the incorporation of community commercial batteries at commercial hubs, utilisation of all rooftops and Clenergy razor and blade solar canopies technology for bus stops and car parking, and deployment of container storage with utility scale batteries. We have solutions for solar on each residential dwelling rooftop, utilising industrial and commercial buildings and carpark solar farms. With technology advances in the industry, we are exploring a range of advanced battery solutions including lithium ion, hybrid batteries, and sodium batteries. We will also review the latest panel and inverter solutions, which offer promising benefits in terms of efficiency, scalability, and environmental sustainability. We remain committed to selecting the most suitable product closer to the build date to ensure alignment with the latest technological advancements.

Environmental and Geographical Considerations: Research has been conducted to address any potential environmental or geographical factors that could impact the feasibility of the solar installation. Our findings indicate no adverse effects on the surrounding airport due to solar panel reflection, thereby mitigating concerns related to the nearby airport. This has been detailed in the supporting letter.

Energy Consumption Patterns and Demands: Utilising extensive data on household and business consumption patterns, with considerations of the green-design, which will reduce consumption, taking into account factors such as fully insulated homes, primary heating via heat pumps, hot water heat pump installations, and electric vehicle infrastructure and batteries to manage night-time loads. These considerations inform the design of the solar solution to effectively meet the energy demands of the community.

Infrastructure and Grid Connection Challenges: Potential challenges related to infrastructure and grid connection have been carefully assessed. Strategies such as competitive pricing, utilisation of embedded networks, and ownership/leasing arrangements for solar-equipped roofs have been devised to address these challenges effectively.

Regulatory Compliance and Approvals: Lightforce, together with Winton, are committed to ensuring compliance with regulatory requirements and obtaining necessary approvals for energy retailing and embedded network deployment. We will collaborate with consultants where required to navigate regulatory complexities and secure approvals in a timely manner.

Construction Disruptions and Mitigation Measures: We acknowledge potential disruptions during the construction phase and have devised comprehensive mitigation measures. Our staged approach to rollout, coupled with access to skilled labour and strategic subcontracting where required, ensures minimal disruption to the surrounding community. We will work alongside construction to reduce costs and improve efficiencies.