

Before Independent Hearings Commissioners
appointed by the Northland Regional Council

under: the Resource Management Act 1991

in the matter of: an application by Meridian Energy Limited for resource consents for earthworks, associated stormwater diversion and discharges, vegetation clearance, and wetland removal for the construction of a solar farm at Ruakākā, Northland (APP.045356.01.01)

between: **Meridian Energy Limited**
Applicant

and: **Northland Regional Council**
Consent Authority

Summary statement – Micah Sherman (Company)

Dated: 5 August 2024

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SUMMARY STATEMENT OF MICAH SHERMAN

INTRODUCTION

- 1 My full name is Micah Weld Sherman.
- 2 My qualifications and experience are set out at paragraphs 2–7 of my statement of evidence.

SUMMARY OF EVIDENCE

- 3 In my evidence, I first address the requirements for grid scale solar development and the site selection and acquisition process for the Proposal.
- 4 When considering all of the site requirements and site constraints associated with solar farm development, the locations where grid scale solar projects can be feasibly developed in New Zealand are limited.
- 5 In particular, key conditions include close proximity to the power grid, appropriate topography and sufficient project scale.
- 6 The Ruakākā site (comprising Sites 1, 2 and 3) is uniquely positioned to meet all of the key conditions for a successful solar farm development. The acquisition of all of the sites enabled the development of a project of sufficient scale. The development of the BESS on Site 1 was also crucial for functional and commercial reasons.
- 7 My evidence then addresses the development of the Proposal. The Proposal is expected to be approximately 100-150 MW with final sizing to be determined during the detailed design phase. It will produce an estimated 150-200 GWh of electricity per year.
- 8 A key aspect of the development of the Proposal was MEL's 'envelope approach'. Under the envelope approach, detailed aspects of the solar farm are not specified within the consent design, but parameters such as the site area and maximum height of the solar farm are defined in order to determine the maximum potential effects. The envelope approach enables MEL to have a degree of flexibility over the choice of solar panels, array structure, array and roading layout and other aspects of the solar farm design.
- 9 In the context of preparing resource consent applications, MEL evaluates the maximum potential effects within the envelope zones for a project. MEL's approach is therefore inherently conservative, ensuring the effects from the completed solar farm (or other renewable development) will be equal to or less than those assessed during the consenting process.

- 10 During MEL's due diligence investigations, MEL had been made aware that Site 1 contained wetlands and was given access to a map developed by Wildlands Consultants Limited, showing their preliminary view of wetland delineation and the wetland characteristics on Site 1. In particular, it showed that the vast majority of wetlands had been defined as rush land with exotic grasses. During the project development phase, with regards to the wetlands, MEL understood that in respect of qualifying wetlands, the National Policy Statement for Freshwater Management 2020 (*NPS-FM*) required an 'effects management hierarchy' approach to address the potential adverse effects, i.e., avoid adverse effects where practicable, then minimise, offset, or compensate.
- 11 Accordingly, MEL undertook a process of considering and developing the project design and layout on the three sites that would properly apply the effects management hierarchy. This included technical input and advice from Boffa Miskell Limited (ecology) and Beca Limited (alternatives and optimisation).
- 12 As per the effects management hierarchy, included in the options that required consideration was a project layout that completely avoided areas that meet the NPS-FM definition of wetlands. Initially MEL had intended to use all of Site 1 for solar development, however this approach was discounted based on advice from Boffa Miskell with regards to the ecological values of the open water wetland areas on Site 1.
- 13 Beca assessed the various options through a multi-criteria analysis considering criteria including economics, constructability, safety, sustainability, and impacts on wetlands. From this analysis, it was concluded that partial wetland removal on Site 1 to avoid the southern-most open water areas and enlarging and enhancing the wetland in this area while creating an ecological corridor to the kānuka forest, combined with a partial offset on Site 3, presented the most appropriate outcome when considering all aspects.
- 14 This option provided for high energy yield and capacity, which was critical to ensuring the solar farm was commercially viable and would be a functioning project, while also optimising the overall ecological value of existing and potential future wetlands and accounting for flooding, safety and maintainability. Under this option, Beca concluded, wetland removal would be avoided to the extent practicable as directed by the NPS-FM (and National Environmental Standards for Freshwater 2020). This position is also supported by Boffa Miskell.
- 15 As is MEL's usual approach, we sought to be open and transparent with the local community and key stakeholders through the development of the Proposal and undertook a significant amount of engagement and consultation prior to lodging the resource consent

applications, including with the Council and mana whenua (Patuharakeke, Te Parawhau & Ngātiwai).

- 16 Ultimately, MEL is confident that we have followed a robust process for the development of the Proposal, including avoiding development in the higher value wetland areas to the extent practicable while maintaining a functioning, commercial project.

5 August 2024

Micah Sherman