MELBOURNE AIRPORT

North Airfield Solar Farm

Further terminal, property and airfield developments are driving Melbourne Airport's increasing electricity demand over the next five years. This growth is occurring within an evolving energy and carbon regulatory environment and increasing community expectations about environmental stewardship.

Melbourne Airport is committed to supporting our increasing energy use in a sustainable way – we have a Scope 1 and 2 Net Zero Target by 2025. Key to achieving that target is by investing in more on-site renewable energy by constructing a second solar farm: the North Airfield Solar Farm.

Over 98% of our emissions are generated from electricity and natural gas used to power and heat our terminals and associated buildings. That's why we are focussed on reducing our reliance on grid energy and introducing renewables.

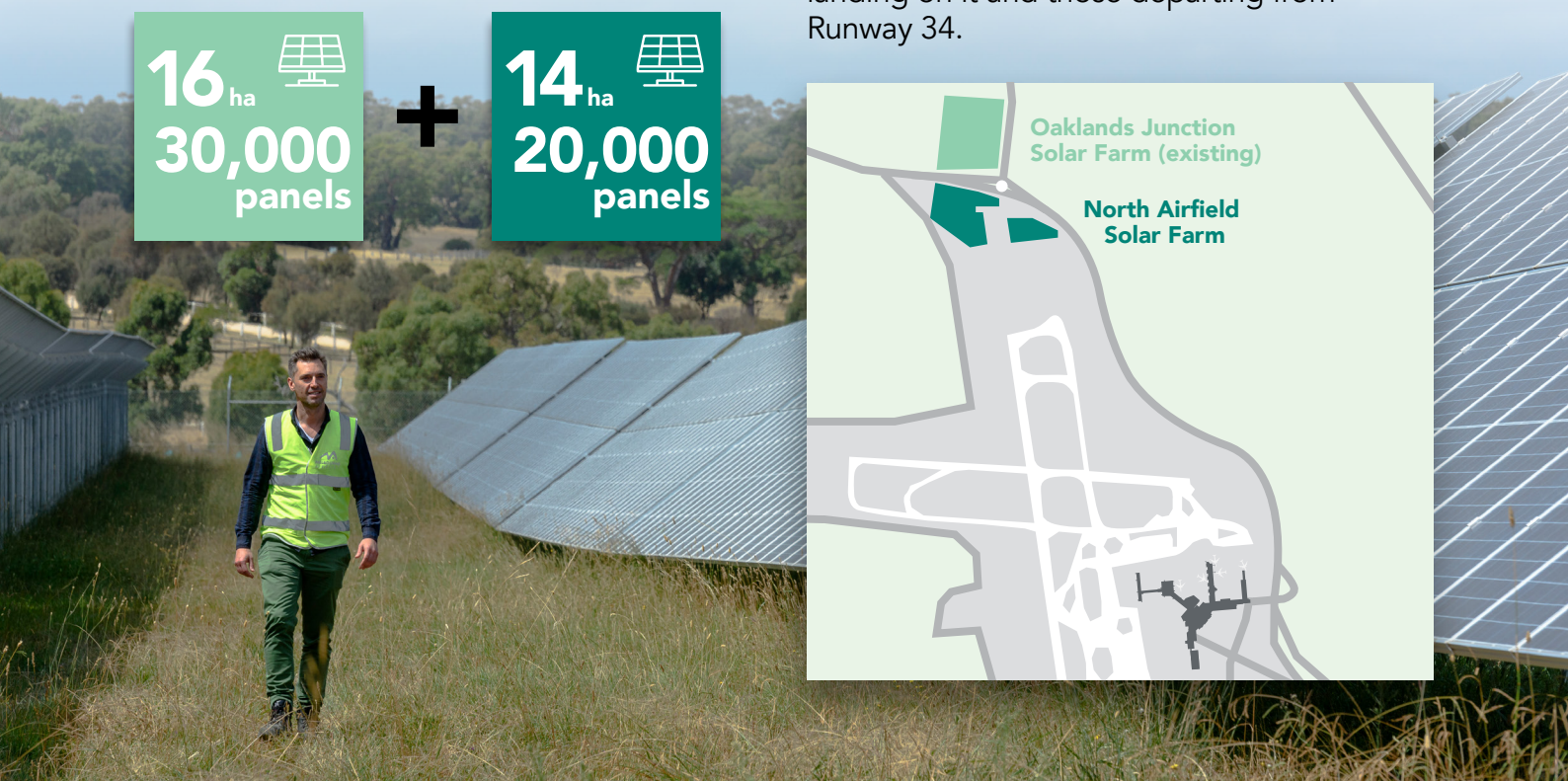
Scope 1 and 2 greenhouse gas emissions

Scope 1 greenhouse gas emissions are the emissions released to the atmosphere as a direct result of an activity, or series of activities at a facility level, and are sometimes referred to as direct emissions.

Scope 2 greenhouse gas emissions are those that are released to the atmosphere from the indirect consumption of energy connected to the facility, such as the trips passengers take from when they leave their home to accessing the airport.

Growing our solar power

The North Airfield solar farm will sit on 14 hectares of Melbourne Airport land on Sunbury Road. It is located approximately 650 metres from the start of Runway 16, and beneath the final approach path of aircraft landing on it and those departing from Runway 34.



The North Airfield solar farm will produce 7.5 megawatts of energy and will sit adjacent to our existing Oaklands Junction solar farm on the corner of Sunbury Road and Oaklands Drive. Design of the solar farm is underway and is estimated to comprise around 20,000 solar panels.

The 12 megawatt Oaklands Junction Solar Farm is 16 hectares in size. It comprises an estimated 30,000 solar panels under the approach to the north-south runway.

The two solar farms together cover an area about the size of 40 soccer pitches. They will generate 34 GW hours of energy per annum and together, provide approximately 40% of the airport's total energy consumption needs. This is enough energy to power terminals 1, 2, 3 and 4.

Construction of the North Airfield Solar Farm will begin in the last quarter of 2023 and is due to be completed by the end of 2024.

The North Airfield Solar Farm is the second largest solar installation at any airport in Australia – our existing Oaklands Junction Solar Farm is the largest.

Design and planning

Melbourne Airport engages the Wurundjeri Woi-wurrung Elders on many developments to assess and manage cultural heritage values under an approved Cultural Heritage Management Plan. This includes the North Airfield solar farm.

Being situated close to Melbourne and at an international airport, planning of the solar farm considered many risks:

- solar glare on aviation and road users
- potential impacts on surveillance and navigation aids
- low level turbulence and wind shear generated by the solar farm affecting flight arrivals to runway 16
- bird roosting.

Aviation planning experts prepared an Aviation Impact Assessment for the North Airfield solar farm to address various aspects of the development when considering solar glare on aviation, such as the:

- type of solar panel surface, whether smooth glass with or without anti reflective coating (ARC)
- tilt angle of the solar panels and whether they are fixed or rotate to follow the sun
- angular distance of the solar panels in relation to true north.

The assessment found that to reduce solar glare on aviation, solar panels should be installed with Anti Reflective Coating at 38° fixed tilt facing 000° True North.

To view more about Melbourne Airport's sustainable and environmentally responsible approach, go to:
melbourneairport.com.au/corporate/environment
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