NILSEN
CELEBRATING 100 YEARS
1916 – 2016

SOLAR

SOLAR: THE NEW FRONTIER

Now more than ever, Australia needs to look to the future. One of the biggest changes impacting our economy will be climate change. This is driving the most profound restructuring of the world economy this century – the transition from fossil fuel based energy to renewable energy.

Solar farms are vital in contributing to managing a clean energy economy. Australian Federal government political parties are aiming to transition to a 50% renewable energy mix by 2030. Nilsen are playing a vital role in this goal, with Australia's electricity generation from renewable energy jumping from 7% in 2017 to 21% in 2018.

The strategy of transitioning electricity generation to renewable energy is critical to dealing with carbon pollution and has Solar companies vying to take advantage of the North Queensland region's 300 days a year of perfect sunshine. The projections see farms in Queensland producing double the amount of power than projects in the UK and 5 to 10% more than southern farms in New South Wales or Victoria.

OUR EXPERIENCE

Nilsen were the electrical contractor on Australia's first ever grid-connected, utility-scale solar and battery storage project. The **Conergy Lakeland Solar & Storage Project** outside of Cooktown, Queensland consisted of a 13MWp/ 10.8MWac solar power PV ground-mounted array featuring 41,440 solar panels with a 1.4MW/5.3MWh smart energy storage solution. This project is aiming to be the first in the world to test a concept known as 'islanding' from the main electricity grid. Nilsen were awarded the Best

Medium Industrial Project for Lakeland Solar Farm at the 2018 Queensland NECA Awards.

Nilsen delivered the **Whitsunday and Hamilton Solar Farm** projects, located west of Bowen at Collinsville, developed by Edify Energy. These two farms house over 430,000 panels across 500 acres, totalling 138MW. Also in Queensland, Nilsen delivered the 148MW utility scale **Ross River Solar** project just south of Townsville, which featured almost half a million panels and an "above ground" cable install on cable tray.

In New South Wales Nilsen completed a commercial solar project at the **Northwest Rapid Transport Maintenance Facility** and are currently on site at both the 175MW **Finley Solar Farm** and 333MW **Darlington Point Solar Farm** in rural New South Wales completing all Electrical, Mechanical and Piling works.

Nilsen were awarded Best Industrial Small Project at the 2018 South Australia NECA Awards for the design, installation and commissioning of the 1.24MW ground mount Solar System at **NAWMA Solar Farm**. Also in South Australia, Nilsen delivered the **Port Pirie Solar Farm** and in Western Australia, the 4MW **Agnew Solar Farm**.

By the end of the 19-20 financial year, Nilsen will have completed over 900MW in solar projects since October 2016, directly contributing to the powering of almost 350,000 Australian households annually.

OUR CAPABILITY

Nilsen work to specifications, agreed time frames and budgets. We have the experience to assist clients in the project conceptual stage by working with managing contractors and consultant engineers so that an effective interface is established, carrying through during construction and post-completion when the projects are finalised.

Mechanical and electrical engineering can be a complicated business when large solar projects are involved and Nilsen have a broad spectrum of capability to fulfil these requirements. We have the capacity for electrical, civil and mechanical scope of works. From trenching and piling, to array box and substation connections Nilsen have the turn key solution through to the testing and commissioning of high voltage, low voltage and panel outputs, Nilsen has the skill. What's more, Nilsen also have large company vehicles to ensure our staff are safely transported from their accommodation to site.

neca EXCELLENCE AWARDS STATE WINNER 2018

AFTER PROJECT COMPLETION: SOLAR MAINTENANCE

Nilsen offer the convenience of a single-source Maintenance and Services Partner for Solar and Storage Facilities. Working together in a collaborative and cohesive manner for successful outcomes, Nilsen proposes an open and transparent relationship that enables our maintenance team to deliver efficiently, without compromising quality, safety and our commitment to our environment.

Our dedicated Maintenance team undertake works in accordance with the Engineering, Procurement and Construction (EPC) contractor's and vendor's specifications. In addition to preventative and corrective maintenance, Nilsen also has capacity to carry out non-vendor activities such as water sourcing and management, remote operation of CCTV, vegetation clearing and solar panel/module cleaning. Whilst cleaning the panels our Maintenance crew are also tasked with checking panels for any damage, delamination etc. and that the cables and connectors are secure.

Wherever possible, Nilsen undertake multiple activities simultaneously to minimise the impact to the facility. Increased supervision of these activities also has the added benefit of lowering HSE risk on site.

OUR PEOPLE

Nilsen has an accredited and qualified team who are strongly supported by our AS4801 certified Safety System and internal ISO9001 compliant Quality procedures. Nilsen utilise a mixture of locally employed labour for non-technical tasks, while mid-level technical resources are mobilised from our regional bases for the electrical, mechanical and maintenance deliverables. For high voltage and technical processes key personnel are mobilised from our major depots in capital cities.

Nilsen are also currently working with an indigenous engagement specialist who are supporting Nilsen to identify roles ideally filled by local indigenous employees.

THE NILSEN LEGACY

Nilsen, founded in 1916, has an unbroken record of excellence in electrical and communications engineering, contracting and maintenance services. Nilsen have a long history of maintenance contracts across Australia, most notably at the **Melbourne Cricket Ground**, **Westfield** nationally and the **420MW Macarthur Wind Farm** in Victoria.

TQCSI AS 4801:2001
Safety Certified
AU1266-QC-SC

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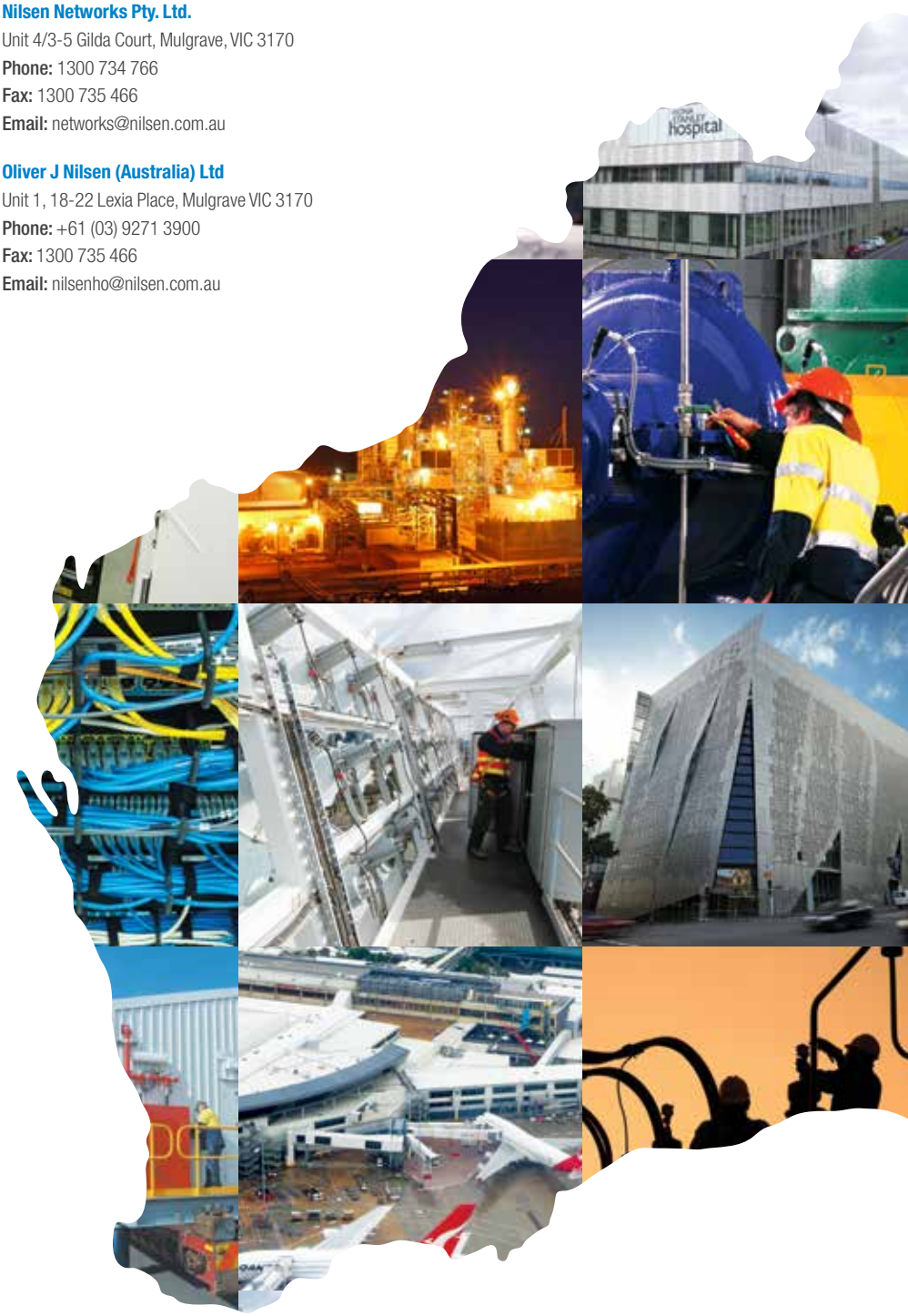

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