



22 November 2019

NEW ENERGY SOLAR (ASX:NEW)

NEW RELEASES 2019 SUSTAINABILITY REPORT

New Energy Solar¹ (**NEW**) today released its 2019 Sustainability Report which details its work in the following key areas:

- Energy and climate change.
- Community engagement.
- Industry innovation and development.
- Health and safety of people and communities.
- Corporate governance and fiduciary duty to stakeholders.

The 2019 Sustainability Report has been prepared with reference to the Global Reporting Initiative and the Principles for Responsible Investing, internationally recognised reporting guidelines. The 2019 Sustainability Report is attached and is also available online at NEW's website (www.newenergysolar.com.au). As an award-winning sustainable investment business, NEW plans to publish an updated Sustainability Report on an annual basis.

For further information, contact:

Fleur Jouault

Investor Relations, New Energy Solar

+61 405 669 632

¹ New Energy Solar Limited (**Company**), and Walsh & Company Investments Limited as responsible entity of New Energy Solar Fund (**Trust**), together **New Energy Solar**, the **Business** or **NEW**.

New Energy Solar

Australia

Level 15, 100 Pacific Highway North Sydney NSW 2060

T 1300 454 801 **F** 1300 883 159

E info@newenergysolar.com.au **W** nes.com.au

United States

One Liberty Plaza, 3rd Floor, New York NY 10006

T 646 860 9900



SUSTAINABILITY REPORT

2019



CONTENTS

1	Letter From The CEO	2	5	Environmental, Social & Governance Performance	11
2	Sustainability Philosophy & Framework	4		Sustainable Development Goals Adhered To	11
	Sustainability Philosophy	4		Environmental	12
	Sustainability Framework	4		• Solar Plant Portfolio	12
	Review	5		• Plant Descriptions (U.S. Plants)	12
3	About New Energy Solar	6		• Plant Descriptions (Australian Plants)	16
	Overview Of New Energy Solar	6		• Plant Descriptions (Under Construction)	17
	Key Milestones	7		• Recycling of Solar PV Panels	17
	Key Portfolio Metrics	8		Social	18
4	Industry	9		• Clean Energy	18
	Global Electricity Demand	9		• Employment & Economic Growth	18
	Global Electricity Supply: Transition To Renewables	9		• Community Contributions	18
	Solar PV Generation	10		• SolarBuddy Program	19
	Carbon Debt Of Solar Construction & Operation	10		• Industry Innovation & Development	20
				• Health & Safety	20
			6	Governance	22
				• Corporate Governance Policies	22
				• Transparency & Anti-Corruption.....	22
				About This Report	24

Disclaimer:

This Sustainability Report is intended to provide general information only and has been prepared by New Energy Solar Limited (**Company**) and Walsh & Company Investments Limited in its capacity as responsible entity (**Responsible Entity**) of New Energy Solar Fund (**Trust**) without taking into account any particular person's objectives, financial situation or needs. Investors should, before acting on this information, consider the appropriateness of this information having regard to their personal objectives, financial situation or needs. We recommend investors obtain financial advice specific to their situation before making any financial investment or insurance decision. Together the Company, the Trust and their controlled entities are referred to as 'New Energy Solar', 'NEW' or the 'Business'. Neither the Company, the Responsible Entity nor the Investment Manager give any warranty, make any representation as to, or accept responsibility for, its accuracy, reliability, timeliness or completeness now or in the future. While the information provided by New Energy Solar is believed to be accurate, New Energy Solar does not accept responsibility for any inaccuracy, or any actions taken in reliance on the information in this Report.

Noted entities:

Walsh & Company Investments Limited (ACN 152 367 649, AFSL 410 433) (**Responsible Entity**), New Energy Solar Fund (ARSN 609 154 298), New Energy Solar Limited (ACN 609 396 983), New Energy Solar Manager Pty Limited (ACN 609 166 645, CAR No. 1237667) (**Investment Manager**).

1. Letter From The CEO

This 2019 report is New Energy Solar's (**NEW** or the **Business**) second Sustainability Report.

Under the United Nations Sustainable Development Goals (**UNSDG**) guidelines "sustainable development has been defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs." New Energy Solar was established to both capitalise on and contribute to the world's increasing awareness of the impact of climate change and the need to better manage the world's resources for present and future generations. We are focused on sustainability both as an investor in the solar industry and also in the way we manage the Business. As an investor in and owner of assets that typically have 30 to 35-year lives, this long-term orientation toward sustainability is critical to our success.

This year I am encouraged by the:

1. activity and investment in the renewable energy sector which continues to support our investment strategy
2. increased focus in corporate and investment spheres on sustainable and responsible investing
3. sustainability ethos in the NEW business which underpins our ability to manage risk and identify opportunity.

RENEWABLE ENERGY SECTOR AND OUR INVESTMENT STRATEGY

In 2018, global clean energy investment totaled US\$332.1 billion. While this level of investment was down 8% on that recorded in 2017, it was the fifth year in a row in which investment had exceeded US\$300 billion¹.

In terms of regions and countries that are facilitating the transition away from fossil-fuel power, China leads the world in terms of volume of investment. However, Europe exhibited the strongest growth in 2018 with investment in clean energy increasing 27%². In 2019 to the end of September, the US is the second largest market for investment in clean energy³.

Within the renewables sector, four of the largest capital projects undertaken in 2018 were wind farms, however solar attracted the most capital compared with the other clean energy technologies⁴. A change in renewable policy in China and the continued decline in the capital costs of developing and building solar plants slowed the nominal value of investment in solar compared to the prior year, but results for the 2019 year to the end of September indicate that solar continues to attract the largest share of investment in new clean energy generation capacity⁵.

For solar investment specifically, we see clear signs that the industry is maturing and stabilising. Bloomberg New Energy Finance reports that 121 countries are now providing data on levels of solar deployment⁶. In a sign of the market's progress, subsidy regimes in many countries are falling away and volumes of subsidy-free projects are continuing to be built, particularly in Europe⁷. In the US, solar and wind have now been the most cost-competitive forms of new build power generation since 2015⁸, even without subsidy support. Solar is steadily becoming a major player in global power generation, comprising 9% of installed generation capacity in 2019, and forecast to grow to 40% by 2050⁹. In the US the forecast build of solar over the next six years requires over US\$59 billion of capital¹⁰.

The maturity and growth of solar is underpinned by demand from corporate and government purchasers of power. In 2019 to the end of September, global private enterprises and public institutions signed contracts to purchase 13.1GW of clean energy, approximately 4.4GW more than were signed by the same point in 2018. The Americas (US, Chile, Argentina) dominate activity, accounting for 80% of global activity in this period. The growth in corporate power purchase agreement (**PPA**) volumes has been extraordinary, given that PPAs amounting to approximately 1GW were signed in 2013 in total¹¹.

Strong growth is expected to remain a feature of the PPA market with global coalitions like RE100, now comprising 206 companies, setting a public goal to source 100% of their electricity consumption from renewable sources by 2050 at the latest¹². Similarly, government policy continues to encourage the uptake of renewable power with governments running auctions for renewable power projects, providing subsidy schemes and mandating targets. Encouragingly, governments at all levels are devising a range of innovative measures and incentives to facilitate the generation, selling and sharing of renewable power.

SUSTAINABILITY AND INVESTOR TRENDS

In the investment market, recent surveys by both Russell Investments¹³ and UBS¹⁴ indicate widespread adoption of ethical investing standards that align with sustainability goals. The Russell Investments survey found that 82% of respondents have a formalised Environmental, Social and Governance (**ESG**) policy, while the UBS survey found that 78% of respondents take ESG principles into consideration in their day-to-day allocation strategies. S&P Global believes that fundamentally, an examination of a company's focus on ESG complements traditional financial analysis and provides a deeper understanding of corporate performance¹⁵.



1. Clean Energy Investment Trends, 2018 Bloomberg New Energy Finance, January 16, 2019
2. Clean Energy Investment Trends, 2018 Bloomberg New Energy Finance, January 16, 2019
3. Bloomberg Clean Energy Investment Trends, 3Q 2019
4. Clean Energy Investment Trends, 2018 Bloomberg New Energy Finance, January 16, 2019
5. Bloomberg Clean Energy Investment Trends, 3Q 2019
6. 2Q 2019 Global PV Market Outlook, May 22, 2019
7. 2Q 2019 Global PV Market Outlook, May 22, 2019
8. PV Magazine levelised cost of energy stack 2009 – 2018
9. Bloomberg New Energy Outlook 2019 Data Viewer
10. Wood Mackenzie
11. Bloomberg NEF Corporate PPA Deal Tracker September 2019
12. there100.org
13. Russell Investments 2019 ESG survey – <https://russellinvestments.com/uk/blog/2019-esg-survey>
14. ESG: Do you or Don't you?, Responsible Investor in association with UBS Asset Management – <https://www.esg-data.com/esg-dydy>
15. S&P Global, The ESG Advantage: Exploring Links to Corporate Financial Performance, April 8, 2019



The prevalence of ESG principles is presenting a challenge for fossil-fuel companies, with prominent investment specialists like BlackRock Investment Management's Evy Hambro advising that ESG will become the biggest challenge for the major mining houses over the coming decade¹⁶. Investing with an ESG lens is increasingly about understanding potential risks as well as ensuring investments align with values.

Our business of investing in utility-scale solar in order to provide attractive risk-adjusted returns for investors is, by its very nature, a compelling investment for investors focused on sustainability and ESG. We are contributing positively and materially to the world's growing awareness of and momentum to address the impact of human activity on the environment and climate. The 16 solar power plants in NEW's portfolio have a combined capacity of 772 megawatts (**MW_{DC}**) and provide power to electricity consumers by way of long-term PPAs. This power is generated without producing emissions and importantly, also replaces fossil-fuel generated power, thereby displacing over one million tonnes of CO₂¹⁷.

SUSTAINABILITY AND OUR APPROACH TO OPERATIONS

We reference the Global Reporting Initiative (**GRI**) guidelines and the Principles for Responsible Investing (**PRI**) to disclose and evaluate the environmental, social and economic impacts of NEW's operations. Conducting business in a sustainable way is imperative for our stakeholders, but also supports investment performance. Studies support the notion that companies with better ESG standards typically record stronger financial performance and beat their benchmarks¹⁸. A focus on ESG issues is thought to enable the achievement of reduced costs, improved worker productivity, mitigated risk potential and the creation of revenue-generating opportunities¹⁹.

Accordingly, in addition to delivering positive social impact via the Business' energy generation, NEW strives to conduct its business activities in a way that contributes to the communities in which we operate. The Business' investment objective considers the way we engage with our stakeholders both during the construction and throughout the operational life of our assets. These considerations include creation of jobs; the wellbeing of our communities; the opportunity to educate; contributing to the progress, adoption and sustainability of clean energy; and improving health and safety on our sites and in our workplaces.

NEW also advocates for a sustainable supply chain, partnering with responsible suppliers and sourcing materials and services locally, when available. We also seek to ensure that our investment management team of over 20 professionals is managed in a way that enhances their productivity, their opportunities and their well-being. The Business adheres to anti-bribery laws, is cognisant of the recently enacted Commonwealth and the proposed New South Wales anti-slavery legislation, and performs risk assessment and due diligence, including the possibility of fraud and related indicators, when assessing contractors, service providers, and other counterparties.

CONCLUSION

I am confident when I consider the way in which the energy sector is evolving that our strategy to focus on solar energy assets is consistent with the developing long-term trends in energy production and consumption. In addition, increasingly, government policy, consumer preference and also investor appetite are supportive of a more environmentally sustainable approach to energy and to the management and operation of business generally. Accordingly, we offer this report to highlight the impact that our business has in furthering the goals of sustainability, and also to enable our stakeholders to understand that we operate our own business in a way that is consistent with sustainability principles.

Yours faithfully,

JOHN MARTIN

Chief Executive Officer

¹⁶ BlackRock preaches ESG to the long converted" Australian Financial Review, June 19, 2019 Matthew Stevens

¹⁷ Estimate utilises the P50 forecast of the first year of each plant's electricity production once operational or acquired by the Investment Manager. Assumes all plants are owned by NEW on a 100% basis and that the plant under construction is fully operational. US CO₂ emissions displacement is calculated using data from the US Environmental Protection Agency's "Avoid Emissions and generation Tool" (AVERT). Australian CO₂ emissions displacement is calculated using data from the Australian Government Department of the Environment and Energy.

¹⁸ Financial Times "Companies with strong ESG scores outperform, study finds" by Jennifer Thompson, August 12, 2018

¹⁹ S&P Global, The ESG Advantage: Exploring Links to Corporate Financial Performance, April 8, 2019

2. Sustainability Philosophy & Framework

SUSTAINABILITY PHILOSOPHY

NEW is aligned with the UNSDG approach to sustainability and believes that “for sustainable development to be achieved, it is crucial to harmonise three core elements: economic growth, social inclusion and environmental protection. These elements are interconnected and all are crucial for the well-being of individuals and societies.”²⁰

SUSTAINABLE DEVELOPMENT GOALS PROMOTED BY NEW'S BUSINESS PRACTICES

In 2015, the United Nations developed 17 Sustainable Development Goals (SDG) to enable individuals, organisations, corporations and government to implement, record and measure their approach to addressing global challenges including poverty, inequality, and climate change. In this Report, NEW uses the SDG symbols to indicate its business activities that contribute to these goals.



SUSTAINABILITY FRAMEWORK

INTRODUCTION

New Energy Solar's primary activity is investing in renewable energy plants that generate emissions-free power, contributing directly to the world's transition to a lower carbon economy. In addition to NEW's patently sustainable character, the Business also seeks to conduct its business in a sustainable way, to ensure that its impact on the communities in which it operates is positive, that its partnerships promote the goals of the UNSDG framework and that its stakeholders can measure its impact.

As an externally managed, stapled investment entity, it is important to note that NEW has a responsible entity board and a company board (**the Boards**) and no employees. NEW's assets are managed by New Energy Solar Manager Pty Limited (**Investment Manager**) which has a team of over 20 people. This team is dedicated to managing two solar investment funds, New Energy Solar and US Solar Fund plc.

GOVERNANCE

Developing, implementing, managing and reporting on the Business' sustainability activities is undertaken by the Investment Manager, which reports to the Boards on a quarterly basis.

The Business' policies, including those pertaining to sustainability, are reviewed by the Boards on an annual basis.

REPORTING

While the UNSDG provides guidance for the way in which NEW is operated and managed, the measurement of the Business' contribution to these goals is through sustainability reporting. This reporting is developed with reference to the GRI and the PRI to ensure its format is particularly suitable for one of NEW's largest stakeholder groups, investors.

Accordingly, NEW's reporting is consistent with the goal of the PRI to understand the investment implications of environmental, social and governance factors. These three criteria provide specific ways of thinking about the Business' initiatives and its impact and help standardise its reporting to align it with other groups focused on sustainability.

NEW believes that it is imperative: to develop clear goals; that the governance framework to ensure NEW operates to achieve these goals is also clear; and that the Business must implement a standardised approach to reporting progress against these goals. Reporting in this way will provide investors and counterparties with clarity around what NEW is doing and why.

²⁰ United Nations Sustainable Development Goals





REVIEW

KEY TOPICS

WHAT IS PROVIDED IN THIS REPORT

Energy and climate change

New Energy Solar's impact on renewable energy development, providing a clean energy source to communities in rural and metro areas.

The displacement of CO₂ emissions via its operating solar portfolio and assisting states in their transition to a low carbon economy.

Approach to recycling damaged and end-of-useful life solar PV panels to maximise material recovery and minimise waste.

Social impact

The Business' impact on local communities, including the creation of jobs and its engagement with and donations to local schools and community groups.

New Energy Solar's involvement in the SolarBuddy program, providing a light source to marginalised communities in developing countries.

Industry innovation and development

NEW's participation in industry innovation and development to promote the adoption and efficiency of renewable energy technology.

Health and safety of people and communities

New Energy Solar's commitment to the health and safety of its team, partners, and surrounding environment.

Its preventative and proactive approach when dealing with health and safety hazards.

Reporting of site and workplace injury statistics.

Corporate governance and fiduciary duty to stakeholders

The Business' approach to implementing a system of rules and practices that preserves the integrity and efficiency of the Business.

Adequate disclosure measures to meet the interests of stakeholders including investors, customers, financiers, government, and the community.

Acquisition and asset management principles and practices as they relate to dealing with anti-corruption, labour standards and other ethical factors.

ENVIRONMENTAL

SOCIAL

GOVERNANCE

3. About New Energy Solar

OVERVIEW OF NEW ENERGY SOLAR

KEY FEATURES

SUMMARY

New Energy Solar

New Energy Solar is an award-winning sustainable investment business focused on investing in utility-scale solar power plants and associated assets that generate emissions-free power. The Business currently focuses on assets with contracted cash flows primarily in the US and also in Australia.

Revenue generated by the Business

The Business generates revenue through directly or indirectly acquiring and operating utility-scale solar power plants. The solar power plants generate revenue by selling the electricity generated by the plants under long term (10+ years) PPAs with creditworthy electricity buyers (**Offtakers**). The Company and the Trust may acquire, directly or indirectly, project companies which own these power plants through different entity structures including subsidiary companies, sub-trusts and US or other offshore partnerships or companies. The Business may also acquire power plants alongside investment partners.

Investment objective

The Business' objective is to acquire utility-scale solar power plants and associated assets, which have contracted cash flows from creditworthy Offtakers, and to help investors generate positive financial returns and social impacts. Financially, these assets are expected to produce stable long-term cash flows, while from a social perspective, an investment in solar assets results in a significant reduction in emissions (relative to fossil fuel power). The Business' mandate allows investments in other types of renewable energy and related assets, however the current focus is on acquiring solar and associated assets.

Investment strategy

The Business seeks to acquire assets which, over their technical life, are expected to support gross portfolio returns of 7% to 10% p.a. (before taxes, management expenses, administration costs, and external corporate borrowing costs)²¹. It is important to note that the Business' distributions may be less than the actual or target returns of its assets. While the Business is currently focused on US and Australian opportunities, the investment mandate is global and investments will be considered in geographies with: supportive regulatory and legal arrangements; well understood solar resource; creditworthy Offtakers; and supportive foreign investment arrangements.

21. The Business may target assets outside this range where market conditions and other circumstances suggest it may be beneficial.





KEY MILESTONES

2015

November
Establishment of NEW

2016

January
Initial equity raising completed

October
Committed to acquire majority interest in NC-47 plant

August
Committed to acquire majority interest in NC-31 plant

December
Second equity raising completed
Acquisition of Stanford plant and TID solar power plant

2017

March
NC-31 plant acquisition completed

June
Announced distribution reinvestment plan
Announced first distribution

December
A\$202m equity raising and listing on the ASX

May
NEW establishes permanent US office
NC-47 plant acquisition completed

October
US debt private placement completed
Committed to acquire 130 MW_{DC} Rigel Portfolio

2018

February
Committed to acquire 200 MW_{DC} Mount Signal 2 plant
Acquired interest in 125 MW_{DC} Boulder Solar 1 plant

May
Committed to acquire minority interests in NC-31 and NC-47

July
Agreement to acquire 111MW_{DC} Beryl plant, NEW's second Australian plant
Issuance of 18.5-year US private placement notes

March
Acquired interest in 200 MW_{DC} Mount Signal 2 plant

June
Agreement to acquire 56MW_{DC} Manildra, NEW's first Australian plant
NEW and Clean Energy Finance Corporation sign binding agreements for A\$50m facility

October
Construction commences at 200MW_{DC} Mount Signal 2 plant

2019

February
Completion of construction and commissioning of eight of the Rigel portfolio plants in North Carolina and Oregon

June
Beryl plant commences commercial operations
Recapitalised existing debt into US\$35m senior secured term loan and credit support

May
Announcement of US\$23m senior secured term loan

July
Beryl plant executed PPA with Kellogg's Australia

September
2 offices
772MW_{DC} solar power plant portfolio valued at \$1.3 billion
573 MW_{DC} operating portfolio
200MW_{DC} acquired and under construction

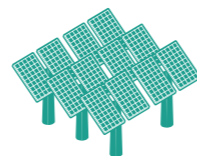
KEY PORTFOLIO METRICS



Global portfolio of 16 solar power plants



Total portfolio capacity of over 772MW_{DC}*



15 sites operational



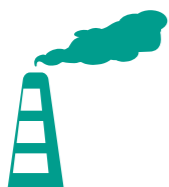
Capacity weighted average PPA term of 16 years^{*22}



6.3% 2019 distribution yield²³



Generating more than 1,600,000 MWh of electricity annually*



Displacing >1,000,000 tonnes of CO₂^{*24}



Equivalent to removing 276,000 US and Australian cars from the road^{*25}



...or powering 224,000 US and Australian homes^{*26}

Notes:

*Estimate utilises the P50 forecast of the first year of each plant's electricity production once operational or acquired by the Investment Manager. Assumes all plants are owned by NEW on a 100% basis and that the plant under construction is fully operational.

22. As at 30 June 2019, including all plants in the NEW portfolio and assumes the option to extend the Manildra PPA is exercised

23. Based on distributions for 2019 year of 7.9 cents (paid and announced) and closing price of A\$1.25 on 30 September 2019

24. US CO₂ emissions displacement is calculated using data from the US Environmental Protection Agency's "Avoid Emissions and generation Tool" (AVERT). Australian CO₂ emissions displacement is calculated using data from the Australian Government Department of the Environment and Energy.

25. Calculated using data from the US Environmental Protection Agency and the Australian Bureau of Statistics.

26. Calculated using data from the US Energy Information Administration (principal agency of the US Federal Statistical System) and the Australian Energy Regulator



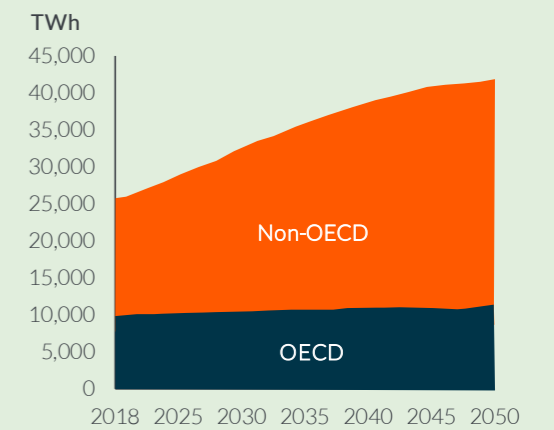


4. Industry

GLOBAL ELECTRICITY DEMAND

Global electricity demand is expected to continue to grow strongly, driven primarily by rapidly expanding economies, such as China and India. These economies, together with developing countries in Africa, the Middle East and Southeast Asia, will see rapid population growth, rising GDP, and better access to electricity. In developed economies, improved efficiency and more modest economic growth means the demand outlook for electricity is relatively flat, although the increasing electrification of cars and transport will add to demand. Growth in demand forecasts vary based on estimates of the uptake of electric vehicles which are anticipated to occur more quickly in Europe and China as a result of investment in charging infrastructure, incentives and regulation. The continued decline in the cost of car batteries is also anticipated to drive demand. Similarly, air conditioning is thought to be a significant factor. Air conditioning is estimated to account for almost 9% of current global electricity demand. Economic growth in China, Asia and India is expected to drive this source of demand significantly over the next 30 years.

Figure 1: Electricity demand, OECD versus non-OECD

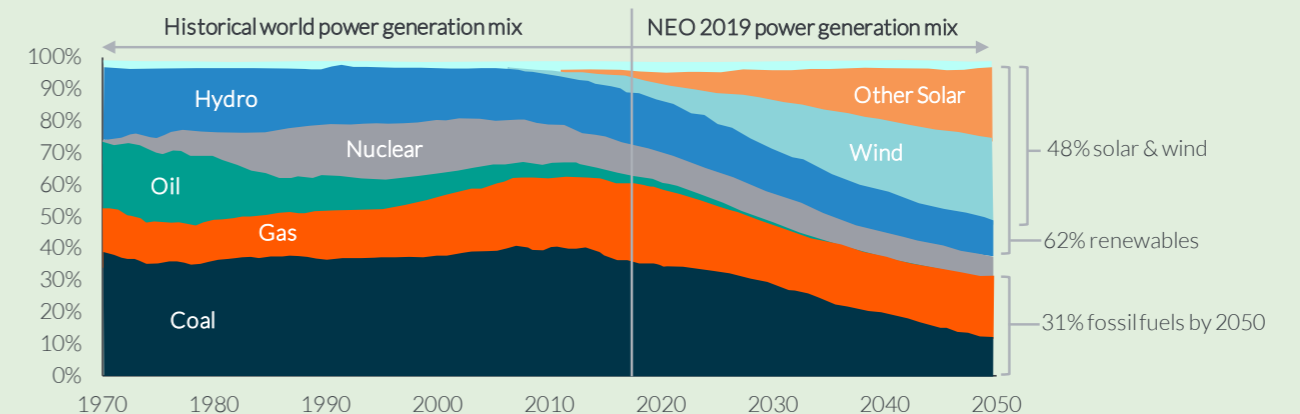


Source: BloombergNEF. Demand is gross electricity generation to meet consumption. BNEF has not consented to the inclusion of this chart in this report.

GLOBAL ELECTRICITY SUPPLY: TRANSITION TO RENEWABLES

The growth in demand for electricity is expected to be met by an increasing proportion of renewable electricity generation. While much of this transition to renewables is being driven by government policy, it is increasingly also a question of cost, as cheap renewable energy and batteries fundamentally change the composition of electricity supply around the world. The low marginal cost of wind and solar is impacting electricity market prices and changing the shape of demand and the requirements of electricity systems. Coal-based generation load, dependent on fuel, is increasingly being seen as not cost-competitive and operationally inflexible. In many markets, government policy is precipitating the retirement of such generation and in others, the cost of maintaining older plants is becoming less acceptable for commercial enterprises. The Business has continued to see a strong pipeline of new solar projects offering attractive investment propositions in the US. This strong activity is underpinned by the American corporate power purchase agreement market which has grown from agreements totalling 1GW of power in 2013 to 13GW in 2018.

Figure 2: Power generation mix



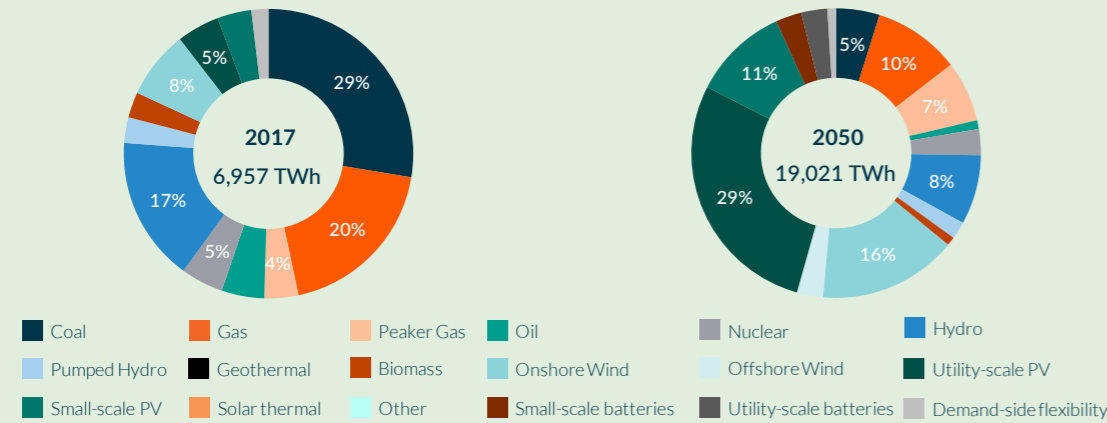
Source: BNEF: New Energy Outlook 2019. BNEF has not consented to the inclusion of this chart in this report.

SOLAR PV GENERATION

Solar energy is a form of renewable energy generated when sunlight is converted into electricity. Solar PV refers to the conversion of sunlight directly into electricity using photovoltaic (PV) cells aggregated in the form of a panel. PV panels can be installed on a range of surfaces with sunlight exposure. Previously, most PV was installed on rooftops for domestic use, although technological developments and improved economics have led to the utility-scale application of solar panels for commercial use. In these utility-scale solar power plants, panels are ground mounted and directly exposed to sunlight. Most new solar plants also utilise tracking systems which optimise the position of the panels relative to the sun to improve efficiency.

The adoption of solar energy has historically lagged hydroelectric and wind generation, with solar accounting for approximately 9% of the world power mix today. More recently, global solar PV installations have increased materially due to technological advances, scaled-up generation and falling unit costs. As a result, solar is anticipated to grow rapidly in utility-scale format but also in small-scale business and household format. Australians are installing household solar at record rates and Australia currently has the highest small-scale PV penetration per capita.

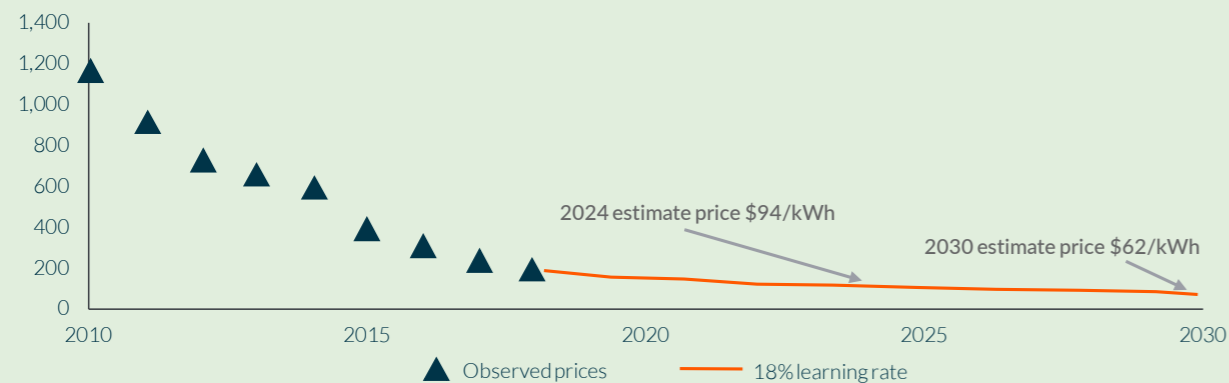
Figure 3: Global power mix



Source: BNEF: New Energy Outlook 2019. BNEF has not consented to the inclusion of this chart in this report.

One of the significant considerations in adopting solar power is its intermittent nature, meaning generation occurs only when the sun shines. In the context of intermittent generation, storage is important as it enables renewable energy to provide comparable, reliable base-load generation and, depending on the storage technology, network stability or support services. With the improvement in energy storage technologies, solar plus storage has the potential to become a flexible and cost-effective solution to bolster power generation capacity as aging thermal generation plants are retired. Batteries can be added to new solar installations or retrofitted to existing solar plants to “smooth” out the daytime generation profile of solar which naturally follows sunlight. Historically, the use of solar plus storage has been limited due to the high cost of storage systems. However, in recent years storage costs have rapidly decreased driven in part by the electric vehicle industry which has achieved technology advancement and cost improvement in batteries.

Figure 4: Lithium-ion battery pack price (real 2018 \$/kWh), historical and forecast



Source: BNEF: New Energy Outlook 2019. BNEF has not consented to the inclusion of this chart in this report.

CARBON DEBT OF SOLAR CONSTRUCTION AND OPERATION

There has been criticism of renewable power generation over many years on the basis that the energy required to produce wind turbines and solar panels outweighs the positive impact of these technologies over their operational lives. In other words, that the technologies have a ‘carbon debt’ that means that the growth of renewable generation will not result in reduced greenhouse gas emissions.

It is the case that factories producing solar panels use large amounts of energy, often from fossil fuels, and that greenhouse gases are emitted during panel production. However, two recent and credible studies have attempted to measure the ‘carbon debt’ created in the production of solar panels and then assess whether this debt is repaid during the life of a solar panel to result in a net positive benefit in terms of displacing CO₂. The studies also compare the lifecycle energy use and greenhouse gas emissions of different sources of electricity and rank their effectiveness in offsetting their ‘carbon debt’ and in contributing to reducing greenhouse gas emissions.

The first study released in 2016 from researchers at Utrecht University in the Netherlands and published in Nature Communications²⁷ calculated the energy required to make all of the solar panels installed around the world between 1975 and 2015, and the carbon-dioxide emissions associated with producing that energy. They also looked at the energy these panels have produced since their installation and the corresponding amount of carbon dioxide they have prevented from being released into the atmosphere. Considerable effort was made to account for the different energy mixes employed to produce solar panels, for example, more fossil-fuel power used in China than in Europe, as well as the differing benefits, that is, more likely to replace fossil-fuel generation in China than in Europe. In conclusion, the study notes that the amount of time needed for a solar panel to produce as much energy as was involved in its creation has fallen from about 20 years to two years or less. In addition, for every doubling of the world’s solar capacity, the energy required to make a panel fell by approximately 12% and associated carbon-dioxide emissions by 17-24%. Since 2016, the world’s solar capacity has increased materially and PV panel production has become more efficient, which suggests that these measures of the effectiveness of solar panels in offsetting the energy consumed in their production have also improved materially.

The second study²⁸ released in 2017 from researchers at the Potsdam Institute of Climate Impact Research, the Norwegian University of Science and Technology and the Yale School for Forestry and Environmental Studies shows that the carbon footprint of solar, wind and nuclear power are many times lower than that of coal or gas with carbon capture and storage (CCS). This remains true after accounting for emissions during manufacture, construction and fuel supply. Specifically, the study finds that each kilowatt of electricity generated over the lifetime of a solar plant has an emissions footprint of 6g CO₂e/kWh which, on the same measure, compares to wind and nuclear on 4g, coal with CCS at 109g, gas with CCS at 78g, hydro at 97g and bioenergy at 98g.

These studies reinforce the value of increasing the development and integration of renewable energy technology in electricity grids and respond to a commonly relied upon criticism of renewable energy technology. The point is succinctly made by the project leader of the 2017 study, Gunnar Luderer, who said in a statement at the time, “Some critics have argued renewable energies could come with high hidden greenhouse gas emissions that would negate their benefits to the climate. Our study now shows that the opposite is true.”

27. “Re-assessment of net energy production and greenhouse gas emissions avoidance after 40 years of photovoltaics development” by Atse Louwen, Wilfried G. J. H. M. van Sark, André P. C. Faaij & Ruud E. I. Schropp, Nature Communications 7, Article number: 13728 (2016). See also reports in The Economist “How clean is solar power?” December 10, 2016 and in CarbonBrief “Solar panels have been benefitting the climate ‘since 2011’” by Sophie Yeo, December 6, 2016.

28. “Understanding future emissions from low-carbon power systems by integration of life-cycle assessment and integrated energy modelling” by Michaja Pehl, Anders Arvesen, Florian Humpeöder, Alexander Popp, Edgar G. Hertwich & Gunnar Luderer, Nature Energy 2, 939-945 (2017), published 8 December 2017. See also reports in CarbonBrief “Solar, wind and nuclear have ‘amazingly low’, carbon footprints, study finds”, Simon Evans 12 December 2017



5. Environmental, Social & Governance Performance

SUSTAINABLE DEVELOPMENT GOALS ADHERED TO IN NEW'S BUSINESS PRACTICES



Sustainability is a global opportunity and NEW's business practices do not exist in isolation.

In 2015, the United Nations created a blueprint to addressing global challenges including poverty, inequality, and climate change, with the 17 Sustainable Development Goals (SDG). Each goal has specific targets to be achieved with a 15-year timeframe (by 2030).

NEW has identified 12 United Nations SDGs that it can best contribute to. In this Report, NEW uses the SDG symbols to demonstrate the business activities that contribute to these specific goals.



ENVIRONMENTAL



NEW PORTFOLIO

New Energy Solar is a business facilitating the transition to a low-carbon economy and to the mitigation of the consequences of climate change by generating clean, emission-free energy and promoting maximum efficiency in the Business' operations. As at September 2019, NEW's portfolio comprised 16 solar plants, 15 of which are operational and one in construction.

Once all of NEW's 16 assets are operational, it will be responsible for displacing over 1,000,000 tonnes of CO₂ emissions, equivalent to powering nearly 224,000 US and Australian-equivalent homes²⁹, or removing over 276,000 US and Australian-equivalent cars from the road, every year³⁰. A description of NEW's operating plants and its plant under construction can be found below.

OPERATING SOLAR POWER PLANTS AS AT 30 SEPTEMBER 2019 – U.S. PLANTS

STANFORD SOLAR POWER PLANT (STANFORD)

1 STANFORD

Stanford is located on a 242-acre leased site in Rosamond, Kern County, California, which is approximately 120 kilometres north of Los Angeles. Stanford is located next to the TID solar power plant and commenced operations in December 2016. NEW acquired its substantial majority interest in Stanford in December 2016.



LOCATION	Rosamond, Kern County, California
GENERATING CAPACITY	67.4 MW _{DC} / 54 MW _{AC}
COD*	December 2016
PPA TERM	25 years from COD
PPA OFFTAKER	Stanford University
O&M SERVICE PROVIDER	SunPower Corp., Systems



157,000[^]
First Year
Generation
(MWh)



81,900⁺
Equivalent CO₂
displaced
(tonnes)



23,900^o
Equivalent
households
powered



17,800^o
Equivalent cars
displaced

*Commercial Operation Date

[^] Generation is illustrative of the first 12 months of energy production based on the power plant's P50 forecast.
⁺ US CO₂ emissions displacement is calculated using data from the US Environmental Protection Agency's "Avoid Emissions and Generation Tool" (AVERT). Australian CO₂ emissions displacement is calculated using data from the Australian Government – Department of the Environment and Energy.
^o Calculated using data from the US Energy Information Administration (principal agency of the US Federal Statistical System) and the Australian Energy Regulator.
^o Calculated using data from the US Environmental Protection Agency and the Australian Bureau of Statistics.

29. Calculated using data from the US Environmental Protection Agency and the Australian Bureau of Statistics.

30. Calculated using data from the US Energy Information Administration (principal agency of the US Federal Statistical System) and the Australian Energy Regulator.



TURLOCK IRRIGATION DISTRICT POWER PLANT (TID)



2 TID

TID is located on a 265-acre leased site in Rosamond, Kern County, California, approximately 120 kilometres north of Los Angeles. TID is located next to Stanford and commenced operations in December 2016. NEW acquired its substantial majority interest in TID in December 2016.



156,800[^]
First Year
Generation
(MWh)



81,800⁺
Equivalent CO₂
displaced
(tonnes)



23,900[◊]
Equivalent
households
powered



17,800[◊]
Equivalent cars
displaced

LOCATION	Rosamond, Kern County, California
GENERATING CAPACITY	67.4 MW _{DC} / 54 MW _{AC}
COD	December 2016
PPA TERM	20 years from COD
PPA OFFTAKER	Turlock Irrigation District
O&M SERVICE PROVIDER	SunPower Corp., Systems

NORTH CAROLINA 48MW_{DC} SOLAR POWER PLANT (NC-47)



4 NC-47

NC-47 is located on a 260-acre leased site in Maxton, Robeson County, North Carolina, which is approximately 166 kilometres east of Charlotte. NC-47 commenced commercial operations in May 2017. NEW committed to acquiring a majority interest in the plant in October 2016 and acquired its interest in May 2017. NEW acquired the minority interests in NC-47 in July 2018.



81,000[^]
First Year
Generation
(MWh)



54,200⁺
Equivalent CO₂
displaced
(tonnes)



6,000[◊]
Equivalent
households
powered



11,800[◊]
Equivalent cars
displaced

LOCATION	Maxton, Robeson County, North Carolina
GENERATING CAPACITY	47.6 MW _{DC} / 33.8 MW _{AC}
COD	May 2017
PPA TERM	10 years from COD
PPA OFFTAKER	Duke Energy Progress, Inc.
O&M SERVICE PROVIDER	DEPCOM Power, Inc.

NORTH CAROLINA 43MW_{DC} SOLAR POWER PLANT (NC-31)

3 NC-31

NC-31 is located on a 196-acre leased site in Bladenboro, Bladen County, North Carolina, which is approximately 232 kilometres east of Charlotte, North Carolina. The plant commenced commercial operations in March 2017. NEW committed to acquiring a majority interest in NC-31 in August 2016 and acquired its interest in the plant in March 2017. NEW acquired the minority interests in NC-31 in July 2018.



LOCATION	Bladenboro, Bladen County, North Carolina
GENERATING CAPACITY	43.2 MW _{DC} / 34.2 MW _{AC}
COD	March 2017
PPA TERM	10 years from COD
PPA OFFTAKER	Duke Energy Progress, Inc.
O&M SERVICE PROVIDER	Miller Bros. Solar LLC



74,800[^]
First Year
Generation
(MWh)



50,100⁺
Equivalent CO₂
displaced
(tonnes)



5,500[◊]
Equivalent
households
powered



10,900[◊]
Equivalent cars
displaced

BOULDER SOLAR 1 POWER PLANT (BOULDER SOLAR 1)

5 BOULDER SOLAR 1

Boulder Solar 1 is located on a 542-acre leased site in Boulder City, Clark County, Nevada, approximately 50 kilometers south of Las Vegas. The plant commenced commercial operations in December 2016. NEW acquired a 49% minority interest in Boulder Solar 1 in February 2018.



LOCATION	Boulder City, Clarke County, Nevada
GENERATING CAPACITY	124.8 MW _{DC} / 100 MW _{AC}
COD	December 2016
PPA TERM	20 years from 1 Jan 2017
PPA OFFTAKER	NV Energy (owned by Berkshire Hathaway)
O&M SERVICE PROVIDER	SunPower Corp., Systems



282,700[^]
First Year
Generation
(MWh)



203,100⁺
Equivalent CO₂
displaced
(tonnes)



24,900[◊]
Equivalent
households
powered



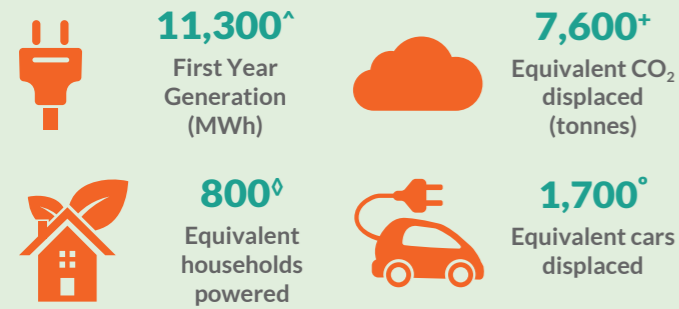
44,200[◊]
Equivalent cars
displaced

ARTHUR SOLAR POWER PLANT (ARTHUR)



6 ARTHUR

Arthur is located on a 35-acre leased site in Tabor City, North Carolina. The plant commenced commercial operations in July 2018.



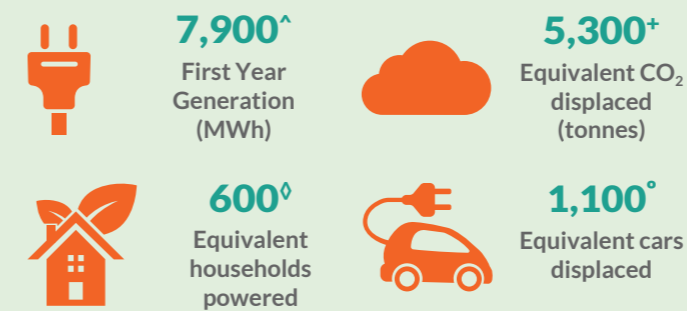
LOCATION	Tabor City, North Carolina, USA
GENERATING CAPACITY	7.5 MW _{DC} / 5.0 MW _{AC}
COD	July 2018
PPA TERM	15 years from COD
PPA OFFTAKER	Duke Energy Progress, Inc.
O&M SERVICE PROVIDER	Cypress Creek Renewables O&M (CCR O&M)

CHURCH ROAD SOLAR POWER PLANT (CHURCH ROAD)



8 CHURCH ROAD

Church Road is located on a 21-acre leased site in Angier, North Carolina. The plant commenced commercial operations in August 2018.

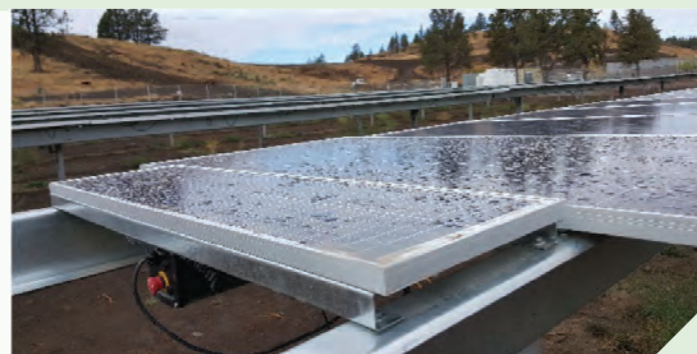


LOCATION	Angier, North Carolina, USA
GENERATING CAPACITY	5.2 MW _{DC} / 5.0 MW _{AC}
COD	August 2018
PPA TERM	15 years from COD
PPA OFFTAKER	Duke Energy Progress, Inc.
O&M SERVICE PROVIDER	CCR O&M

BONANZA SOLAR POWER PLANT (BONANZA)

7 BONANZA

Bonanza is located a 57-acre leased site located 30 kilometres east of Klamath Falls, Oregon. The plant commenced commercial operations in December 2018.



LOCATION	Bonanza, Oregon, USA	12,800[^] First Year Generation (MWh)	10,900⁺ Equivalent CO ₂ displaced (tonnes)
GENERATING CAPACITY	6.8 MW _{DC} / 4.8 MW _{AC}	1,200[^] Equivalent households powered	2,400[^] Equivalent cars displaced
COD	December 2018		
PPA TERM	12.9 years from COD		
PPA OFFTAKER	PacifiCorp		
O&M SERVICE PROVIDER	CCR O&M		

COUNTY HOME SOLAR POWER PLANT (COUNTY HOME)

9 COUNTY HOME

County Home is located on a 30-acre leased site located five kilometres southeast of Rockingham, North Carolina. The plant commenced commercial operations in September 2018.



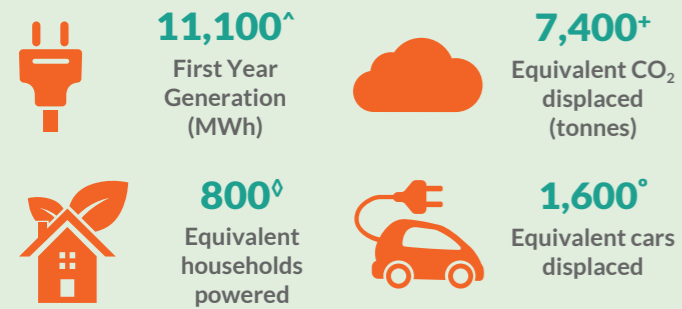
LOCATION	Rockingham, North Carolina, USA	10,800[^] First Year Generation (MWh)	7,200⁺ Equivalent CO ₂ displaced (tonnes)
GENERATING CAPACITY	7.5 MW _{DC} / 5.0 MW _{AC}	800[^] Equivalent households powered	1,600[^] Equivalent cars displaced
COD	September 2018		
PPA TERM	15 years from COD		
PPA OFFTAKER	Duke Energy Progress, Inc.		
O&M SERVICE PROVIDER	CCR O&M		

HANOVER SOLAR POWER PLANT (HANOVER)



10 HANOVER

Hanover is located on a 45-acre leased site in Maysville, North Carolina. The plant commenced commercial operations in April 2018.



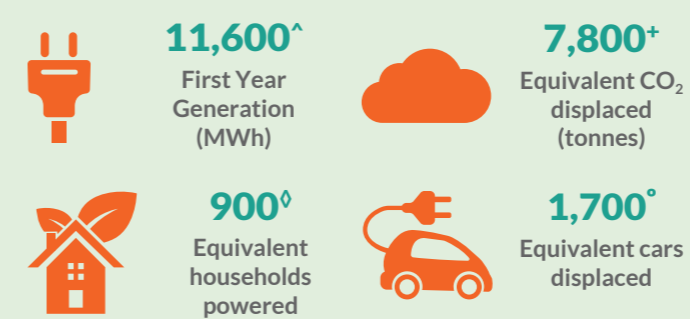
LOCATION	Maysville, North Carolina, USA
GENERATING CAPACITY	7.5 MW _{DC} / 5.0 MW _{AC}
COD	April 2018
PPA TERM	15 years from COD
PPA OFFTAKER	Duke Energy Progress, Inc.
O&M SERVICE PROVIDER	CCR O&M

ORGAN CHURCH SOLAR POWER PLANT (ORGAN CHURCH)



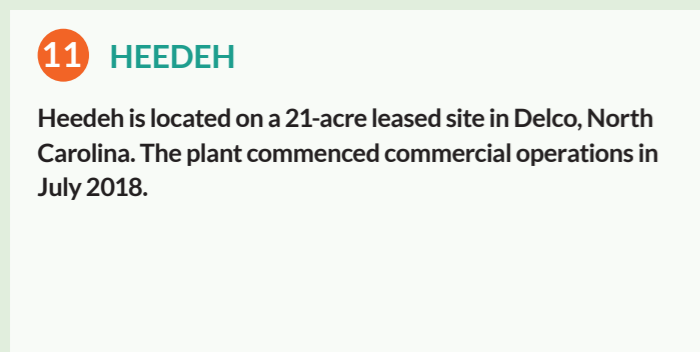
12 ORGAN CHURCH

Organ Church is located a 45-acre leased site located 15 kilometres northwest of Kannapolis, North Carolina. The plant commenced commercial operations in February 2019.



LOCATION	Organ Church, North Carolina, USA
GENERATING CAPACITY	7.5 MW _{DC} / 5.0 MW _{AC}
COD	February 2019
PPA TERM	15 years from COD
PPA OFFTAKER	Duke Energy Progress, Inc.
O&M SERVICE PROVIDER	CCR O&M

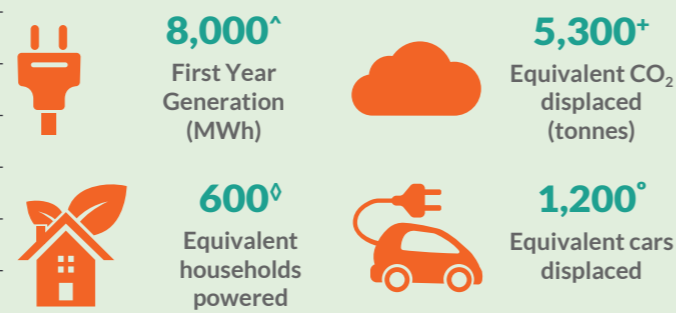
HEEDEH SOLAR POWER PLANT (HEEDEH)



11 HEEDEH

Heedeh is located on a 21-acre leased site in Delco, North Carolina. The plant commenced commercial operations in July 2018.

LOCATION	Delco, North Carolina, USA
GENERATING CAPACITY	5.4 MW _{DC} / 4.5 MW _{AC}
COD	July 2018
PPA TERM	15 years from COD
PPA OFFTAKER	Duke Energy Progress, Inc.
O&M SERVICE PROVIDER	CCR O&M



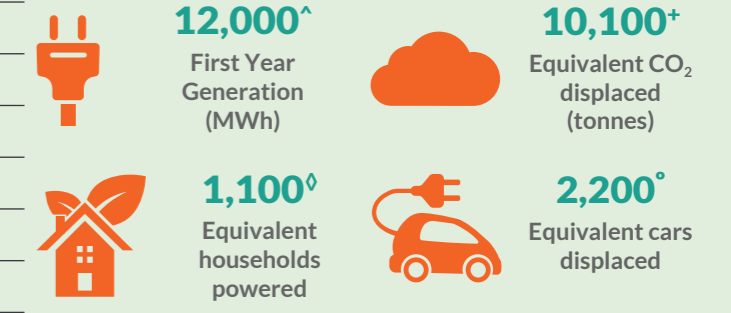
PENDLETON SOLAR POWER PLANT (PENDLETON)



13 PENDLETON

Pendleton is located on a 44-acre leased site five kilometres west of Pendleton, Oregon. The plant commenced commercial operations in September 2018.

LOCATION	Pendleton, Oregon, USA
GENERATING CAPACITY	8.4 MW _{DC} / 6.0 MW _{AC}
COD	September 2018
PPA TERM	13.2 years from COD
PPA OFFTAKER	PacifiCorp
O&M SERVICE PROVIDER	CCR O&M



Pendleton Ground View -

OPERATING SOLAR POWER PLANTS AS AT 30 SEPTEMBER 2019 – AUSTRALIAN PLANTS

MANILDRA SOLAR POWER PLANT (MANILDRA)



1 MANILDRA

Manildra is located on a 120-hectare leased site 1.5 kilometres north east of the Manildra town centre. The plant achieved full commercial operations in December 2018. NEW announced its agreement to acquire Manildra in June 2018.



118,300[^]
First Year
Generation
(MWh)



97,000⁺
Equivalent CO₂
displaced
(tonnes)

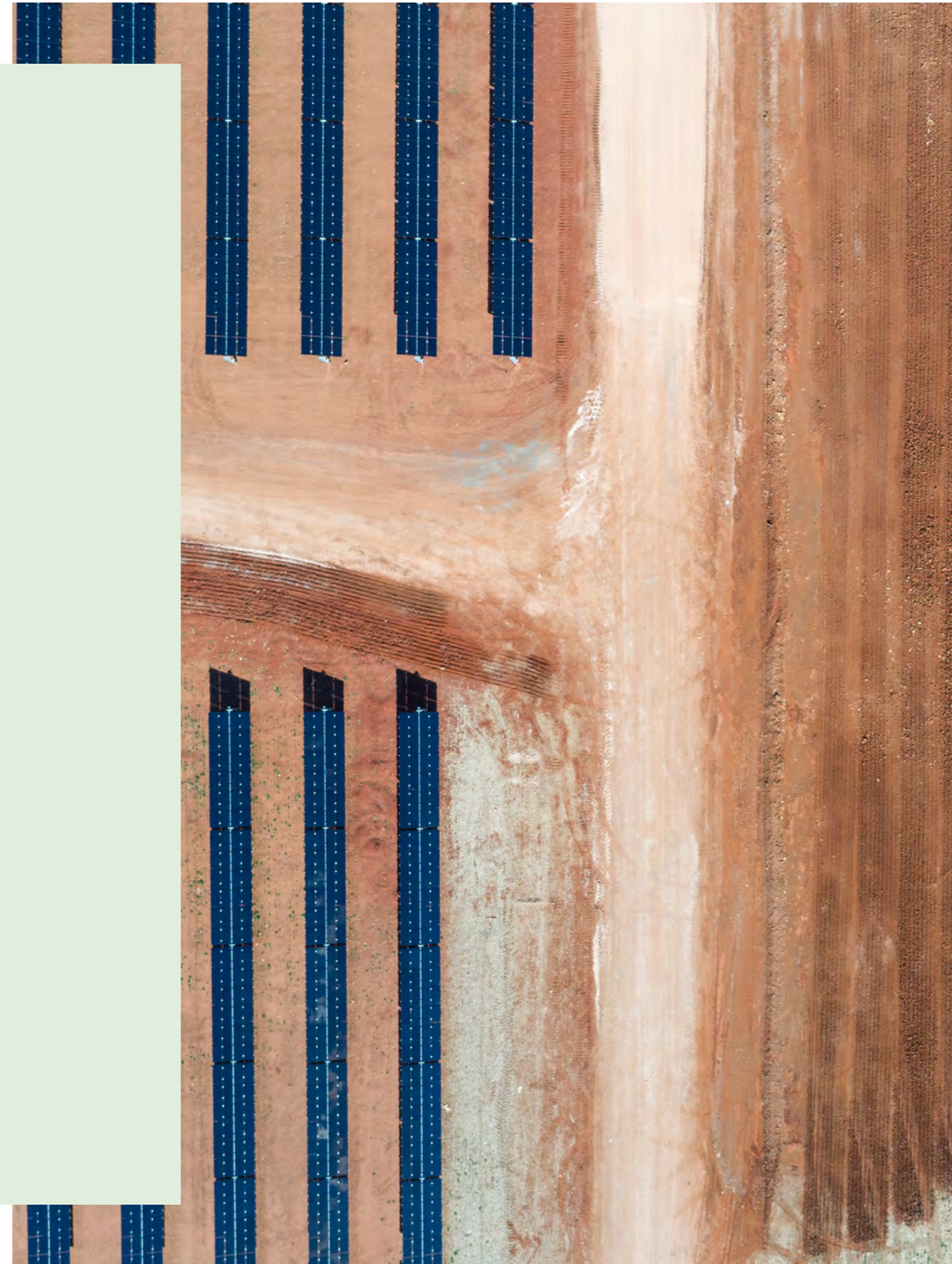


23,000^o
Equivalent
households
powered



40,000^o
Equivalent cars
displaced

LOCATION	Manildra, New South Wales, Australia
GENERATING CAPACITY	55.9 MW _{DC} / 46.7 MW _{AC}
COD	December 2018
PPA TERM	10 years from COD, with an option to extend to 2030
PPA OFFTAKER	EnergyAustralia
O&M SERVICE PROVIDER	First Solar



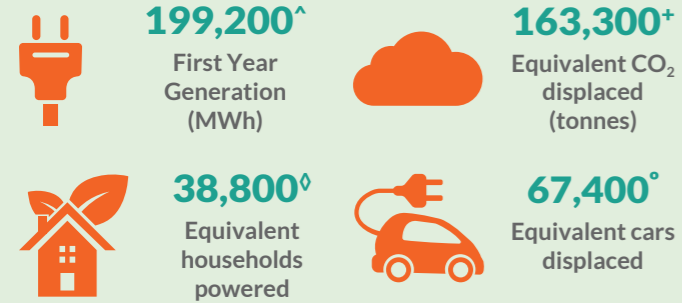
AUSTRALIAN PLANTS (CONTINUED)

BERYL SOLAR POWER PLANT (BERYL)



2 BERYL

Beryl is located in Central West NSW, approximately five kilometres west of Gulgong. The plant achieved full commercial operations in June 2019. NEW announced its agreement to acquire Beryl in July 2018.



LOCATION	Beryl, New South Wales, Australia
GENERATING CAPACITY	110.9 MW _{DC} / 87 MW _{AC}
COD	June 2019
PPA TERM	15 years (Sydney Metro) ³¹ c. 7.5 years with option to extend to December 2029 (Kellogg's) ³²
PPA OFFTAKER	Sydney Metro (69% of generation) Kellogg's Australia (29% of generation)
O&M SERVICE PROVIDER	First Solar Australia

31. The Sydney Metro PPA represents approximately 69% of Beryl's generation during the 15-year term.

32. The Kellogg's Australia PPA represents approximately 29% of Beryl's generation during the ~7.5-year initial term. Kellogg's Australia has an option to extend the term for three years until 31 December 2029.

PLANTS UNDER CONSTRUCTION AS AT 30 SEPTEMBER 2019

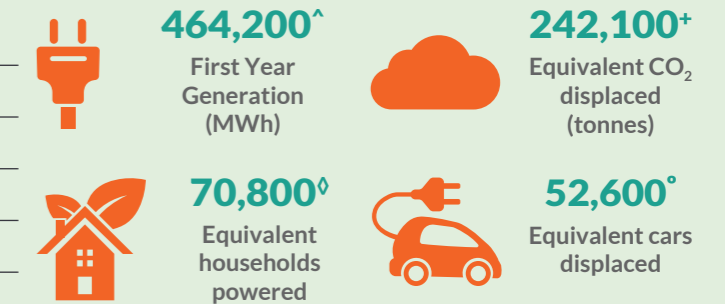
MOUNT SIGNAL 2 SOLAR POWER PLANT (MS2)



1 MS2

MS2 is currently under construction in Imperial Valley, California. The plant is expected to reach commercial operations in December 2019. NEW announced its agreement to acquire MS2 in February 2018.

LOCATION	Imperial Valley, California, USA
GENERATING CAPACITY	199.6 MW _{DC} / 153.5 MW _{AC}
COD	Q4 2019
PPA TERM	20 years from COD
PPA OFFTAKER	Southern California Edison
O&M SERVICE PROVIDER	First Solar



TACKLING SOLAR PANEL RECYCLING

As a sustainably-run business, New Energy Solar is conscious of its obligations to carefully consider and plan for the future disposal of solar panels. Given New Energy Solar's solar plants are relatively new, the Business has not yet had to manage the disposal of large quantities of solar panels. During construction and operation, the solar panels employed in NEW's plants have proven to be very robust and rates of damage and waste have been very low. A small number of panels damaged during construction and as a result of extreme weather conditions have been recycled. With respect to the bulk of the panels installed at NEW solar power plants, which have life cycles of 25+ years, NEW intends to establish a solar panel recycling approach that can facilitate the recovery of valuable secondary raw materials and promote high levels of reuse.

To this end, NEW is investigating the recycling programs available in the industry and the approaches of its development and construction partners. Of particular note in this regard is First Solar, Inc., a partner of NEW on the Manildra and Mount Signal 2 plants. First Solar established the industry's first global PV module recycling program in 2005 and not only designs its thin film modules to withstand harsh climate conditions for 25+ years, but also ensures that they are suited for high-value recycling to maximise material recovery at the end of a module's useful life. First Solar's high-value recycling process recovers more than 90% of the semi-conductor material for reuse in new First Solar panels and 90% of the glass for use in new glass container products. One kilogram of First Solar's semiconductor material can be recycled 41 times, which translates into a use time of more than 1,200 years, assuming a 30-year panel life.

SOCIAL



CLEAN ENERGY

New Energy Solar owns solar power plants in local communities in the United States and in Australia. These solar power plants contribute to the provision of renewable energy in Australia and in the United States and, as a result, contribute to the displacement of carbon dioxide and other greenhouse gases. The contribution of each of our assets to reducing carbon dioxide is detailed on preceding pages 12 to 17 of this report.

In addition, NEW strives to make tangible contributions to the prosperity and development of the communities in which it operates and to progress the development of the renewable energy industry, through education and participation in research.

EMPLOYMENT AND ECONOMIC GROWTH

The construction of each of New Energy Solar's plants employs a large number of people (over 450 on large projects at certain times). Once operational, the plants provide a smaller number of long-term employment opportunities for members of the communities in which the plants are located. NEW has contributed to the development and growth of renewable and low-emissions energy which, as an industry, has created a significant number of new jobs. In the United States, it is estimated that in 2018, 611,000 employees worked in zero-emissions generation technologies, including renewable and nuclear and another 189,000 worked in low-carbon emission technologies, including biofuels and advanced/low emissions gas. Solar alone employed 242,343 people in power generation and solar and wind were the leading categories for energy construction employment³³.

While Australia is a smaller market, the growth in this employment category is also material. It is estimated that 17,740 people were employed in renewable energy activities in Australia in 2017-18, an increase of 27% over the previous year. The largest category of employment was in rooftop solar, with utility-scale solar constituting the next largest employer³⁴.

COMMUNITY CONTRIBUTIONS

In addition to New Energy Solar's contribution to employment and economic growth in the communities in which it operates, the Business also provides small grants directly to community organisations including local schools and not-for-profit groups. The Business has also hosted community days at its solar power plants, as well as conducted school group tours and education forums. All of these activities are designed to ensure NEW's plants and operations are well-understood in their communities and also to educate communities on the way in which energy technology and electricity production is advancing.

33. The 2019 U.S. Energy and Employment Report, a joint project of the National Association of State Energy Officials and Energy Futures Initiative <https://static1.squarespace.com/static/5a98cf80ec4eb7c5cd928c61/t/5c7f3708fa0d6036d7120d8f/1551849054549/USEER+2019+US+Energy+Employment+Report.pdf>

34. Australia Bureau of Statistics Employment in Renewable Energy Activities, Australia, 2017-18, issued 17 April 2019



SOCIAL (CONTINUED)

SOLARBUDDY PROGRAM



To make a positive contribution to communities and on significant global social issues through active participation and contributions (beyond NEW's primary operations of solar energy generation) is a goal for the Business. NEW and Australian charity, SolarBuddy, announced a partnership in May 2018 to assist communities suffering energy poverty. Energy poverty describes the lack of access to modern energy services including household electricity. Energy poverty is considered fundamental to fulfilling basic social needs, driving economic growth and fuelling human development. The United Nations and World Health Organization have found that the wealth and development of a nation is closely correlated to the type and extent of access to energy.

SolarBuddy estimates that 1.4 billion people around the world do not have access to modern electricity, with many resorting to burning large amounts of wood and toxic kerosene as their primary light source during the evening. NEW is proud to partner with SolarBuddy to address this problem through their two-pronged approach – education and illumination.

In developed countries, such as Australia, the initiative promotes energy poverty education, providing children in schools with the opportunity to build SolarBuddy solar lights. The SolarBuddy solar light is the world's first and only LED solar light that can be assembled by a child as young as seven years. The light comprises a high UV resistant plastic and a tough rubber encasement designed to prolong usage. Since 2016, over 130,000 students across 500 schools and 21 countries have participated in the SolarBuddy Education Program; building lights and distributing them to marginalized communities around the world.

These solar lights have also been used by Non-Governmental Organisations (NGOs) including Australia Aid, Red Cross and the United Nations. To date, over 500,000 lives have been illuminated by SolarBuddy solar lights.

This year the program funding provided by NEW contributed to the distribution of 2,700 lights in Papua New Guinea. In Papua New Guinea, 86% of the population lives in rural areas and only 6.3% of the population is connected to electricity. The reading aptitude of Papua New Guineans is poor, with 38% of the population aged eight and above not able to read or write³⁵. The lights went specifically to communities in the Southern Highlands, Milne Bay Province, Simbu Provinces, Central Province and Oro Province. The rugged terrain in these areas meant that distribution of these lights took four days.

SolarBuddy and their Australian aid partner the Kokoda Track Foundation have tracked the impact of the lights and found that children using SolarBuddy lights were studying 78% longer than previously and that the families in possession of these lights had reduced their average weekly expenditure on kerosene by approximately 80%.

Actively seeking initiatives to promote wellbeing within our community and environment is a priority for NEW and partnering with SolarBuddy is well aligned with this objective. It is NEW's intention to continue seeking out opportunities, such as SolarBuddy, to expand our positive impact and raise awareness on issues that can be addressed by renewable energy sources.

35. Extract from SolarBuddy partner report



SOCIAL (CONTINUED)

INDUSTRY INNOVATION AND DEVELOPMENT

New Energy Solar is also actively involved in developing the renewable energy industry and in promoting innovation in the sector, participating in research trials to test and further advance technology to improve solar energy efficiency and operation.

At Beryl in New South Wales, NEW is working with Industrial Monitoring & Control (**IMC**) as a trial site for short-term production forecasting. Accurately forecasting the output of grid connected solar systems will reduce the costs incurred by solar plants through forecasting errors, is important for the stability and management of the electrical system as a whole and critical to increasing the overall penetration of solar and renewables in electricity networks. Outcomes from the project are expected to include the development and trial of a commercial multi-model forecasting system utilising the Australian Energy Market Operator (**AEMO**) self-forecasting interface for forecast submission for use in the industry. The project is partially funded through the Australian Renewable Energy Agency (**ARENA**) Advancing Renewables program and conducted with the following project partners: University of South Australia Centre for Industrial and Applied Mathematics, University of New South Wales and the CSIRO.

Similarly, at Manildra in New South Wales, NEW is working with Solcast as a trial site for a project to operationalise, deploy and improve self-forecasting technology for solar farms and to submit dispatch forecasts to AEMO. The project is partially funded through the ARENA Advancing Renewables program and conducted with many industry partners.

New Energy Solar's contribution to furthering the development of clean energy in Australia has been recognised in the 2019 Australian Business Awards where the Business was the winner of the Eco Innovation category.

HEALTH AND SAFETY



New Energy Solar is committed to protecting the environment, health, and safety of the Investment Manager's team and NEW's contractors, customers, stakeholders, and the global communities where NEW operates. We recognize that by integrating sound environmental, health, and safety management practices into all aspects of our business, we can construct, operate, and maintain our renewable power generation plants responsibly and profitably while conserving and enhancing resources for future generations.

The health and safety of the NEW team and NEW's contractors and service providers, and the surrounding communities are of pivotal importance to the Business. As NEW's solar power plants are generally located in rural areas often adjacent to farm properties, and contain high voltage and transmission equipment, any accident could threaten peoples' well-being and could result in damage to property, environmental issues, endangerment of wildlife, plant availability loss and reputational impacts. As such, health and safety are firmly ingrained in all processes of the Business, and we strive for continuous improvement in our systems and in the impact of our operations, programs and processes. It is NEW's objective to have an injury free workplace, which is achievable via appropriate policies and procedures, and an emphasis on safety culture throughout the Business.



HEALTH AND SAFETY (CONTINUED)

Prior to the beginning of construction activities on each of our solar sites, an Engineering, Procurement and Construction Agreement (**EPC Agreement**) must be agreed upon and signed by NEW and the EPC counterparty. Each EPC agreement contains a comprehensive and systematic Health and Safety Plan that explicitly outlines certain requirements according to each site location and layout of the plant. Each plan is developed to identify the health, safety, and security measures that will be employed at the work site at all times and includes the various state and federal laws to which all contractors, subcontractors, and site visitors must adhere.

At the commencement of construction activities, a site health and safety committee is established for each location, consisting of both management and field representatives from the EPC contractor, all of whom must obtain OSHA³⁶ construction safety certification. This committee is responsible for facilitating daily safety briefings and weekly “toolbox” meetings, designed to address potential safety concerns on-site, and ensure the implementation of preventive safety measures.

Injury reporting and investigation is of equal importance, as it allows the committee to evaluate existing preventive measures, thus reducing the likelihood of a similar event occurring in the future. On site, all injuries and incidents must be reported immediately. Reporting is followed by a well-documented investigation process, detailed report, and corrective action.

INJURY REPORTING

Injury reporting for the six months to 30 June 2019 noted that the total recordable injury rate for all NEW work sites was zero and there were also no lost time accidents. There were six non-injury safety incidents including a bee sting and wood splinter removal at Mount Signal; two vehicle incidents involving kangaroos at Manildra resulting in minor damage to one vehicle but no personnel injuries; and two vegetation fires caused by sparks from mowers at Stanford. Both fires were extinguished by the machine operators.

NEW’s underlying philosophy is that all injuries and accidents can be prevented. While the Business strives to provide sustainable and reliable energy to the community, incorporated in this goal is its commitment to providing a safe and healthy environment for the benefit of all personnel working on NEW sites, communities, and stakeholders alike.

36. Occupational Safety and Health Administration.



GOVERNANCE



The NEW Boards recognise the importance of strong corporate governance, particularly with respect to implementing sustainable business practices, and are committed to high standards of governance and compliance. In this respect the Boards, where appropriate, benchmark the Business against the 3rd Edition of the Corporate Governance Principles & Recommendations issued by the Australian Stock Exchange Corporate Governance Council (**ASX Recommendations**). The Boards' corporate governance practices have been documented in the Corporate Governance Charter, which is made available to securityholders on the NEW website, and other formal internal policy documents. The NEW Boards have adopted the following governance framework, which has been prepared with regard to the ASX Recommendations. The policies are reviewed and updated at least annually by the NEW Boards and some are reported on in the Corporate Governance Statement, which is included in the annual report each year.

CORPORATE GOVERNANCE POLICIES

- Continuous Disclosure
- Security Trading Policy
- Code of Conduct
- Diversity Policy
- Risk Management System
- Capital Management Framework
- Financial Risk Management Policy & Framework
- Delegation Authority Policy
- Audit & Risk Committee Charter
- Conflicts Management Policy
- Renewable Energy Asset Valuation Policy
- Related Party Disclosure Summary (which includes a conflicts of interest register)
- Board Policy
- Insider Trading Policy

The Trust and the Company are disclosing entities for the purposes of the *Corporations Act 2001 (Cth)* (**Corporations Act**) and will be required to comply with the continuous disclosure regime under the Corporations Act. As such, the NEW Boards have established internal systems and procedures to ensure that timely disclosure is made to securityholders. In addition to its continuous disclosure obligations, NEW has a policy of keeping all securityholders informed, including providing information on all major developments affecting NEW's activities, releases to the media and despatch of financial reports.

Information relating to NEW's governance and all ASX announcements made to the market, including annual and half-year financial results, are placed on the NEW website.

In addition to the above, NEW looks to enhance its disclosure by adhering to the Australian Securities & Investments Commission (**ASIC**) Regulatory Guide 231 – Infrastructure Entities (**RG231**). RG 231 consists of nine benchmarks and 11 disclosure principles designed to strengthen investor confidence and enable investors to better understand the characteristics of infrastructure entities and the risks associated with them. NEW addresses all nine benchmarks and 11 disclosure principles via its RG 231 disclosure, which can be found on the NEW website.

NEW has also continued its efforts to assess board composition, and actively facilitate a more diverse and representative management structure. The NEW Boards include in the Corporate Governance Statement a summary of NEW's progress towards achieving the measurable objectives set under the Diversity Policy for the year to which the annual report relates and the proportion of female directors on the Company Board.



The NEW Boards have established a comprehensive compliance framework. This includes the maintenance by the Responsible Entity of a compliance plan (which is externally audited every year) that sets out how the Responsible Entity will ensure compliance with both the Corporations Act and the Trust constitution. A compliance committee has also been established to monitor compliance with the compliance plan. The committee itself is comprised of three members, two of which are external representatives and are independent of the Responsible Entity.

Any breaches of policies and procedures will be reported in accordance with NEW's established reporting procedures. The reporting procedures may involve reporting the breach directly to the NEW Boards or to ASIC, depending on the seriousness of the breach.

TRANSPARENCY AND ANTI-CORRUPTION

The governing values of NEW's culture include integrity, honesty, and professionalism, which are essential to uphold NEW's reputation in the industry and by extension, its success. As such, demonstrating transparency and professional rigour is essential in all of NEW's activities across its office locations and solar plants.

As part of its investment philosophy, NEW places emphasis on environmental and social factors when making investment selection, retention, and disposal decisions. Labour standards and ethical factors, including consideration of the recently enacted Commonwealth and the proposed New South Wales anti-slavery legislation, are also considered when making these decisions. NEW does not use specific criteria or mechanisms for measuring the success of its approach to these factors and standards.



6. About This Report

Report Scope: New Energy Solar's Sustainability Report describes its work in the following key areas:

- Energy and climate change
- Community engagement
- Industry innovation and development
- Health and safety of people and communities
- Corporate governance and fiduciary duty to stakeholders

This report is prepared with reference to the Global Reporting Initiative (**GRI**), and the Principles for Responsible Investing (**PRI**), internationally recognised reporting guidelines.

Boundaries: This Sustainability Report focuses on NEW's global operations (encompassing its operations in the US and Australia), except where indicated.

Reporting Year: NEW has reported data relating to the year from 1 July 2018 to 30 June 2019 unless otherwise noted. In some cases, data and information may include programs and activities underway or introduced in the period since 30 June 2019, as indicated.

Currency: All references to currency are in Australian dollars, unless otherwise indicated.

Reporting History: This is New Energy Solar's second annual Sustainability Report.

Contact: Please direct questions on this Sustainability Report or topics related to NEW's corporate responsibility disclosures to info@newenergysolar.com.au.

Environmental Impact Calculator: Find out what your New Energy Solar Investment could mean for the environment.



newenergysolar.com.au/calculator

