KUGA ELECTRICAL

MASTER ELECTRICIAN OF THE YEAR
MASTER ELECTRICIANS AUSTRALIA
STATE EXCELLENCE AWARDS
WINNER 2023

CAPABILITY STATEMENT

Empower Your Business with a New Way Of Delivering Energy

ISO 9001:2015 • ISO 14001:2015 • ISO 45001:2018
CERTIFIED MANAGEMENT SYSTEM
BCert

AWARDS

ACCREDITATIONS & MEMBERSHIPS

LICENCES

VIC REC 27103 **NSW REC** 318148C **QLD REC** 88831 **TAS REC** 784865990 **ACT REC** 20211556

RENEWABLE ENERGY TARGET

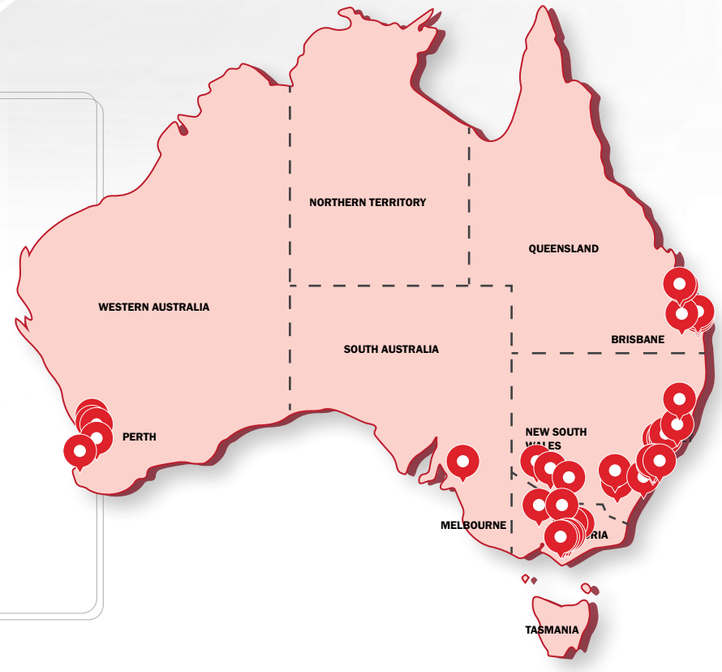
ABOUT US

KUGA Electrical is one of the largest independently owned solar companies in Australia. We have state presence in VIC, NSW, QLD and SA. KUGA's purpose is to generate savings for businesses at a really healthy return on investment. Our solar services are Solar Power, Solar Battery Storage, Solar Off Grid, Solar Carparks, Ground Mount System, as well as energy-efficient solutions like LED Lighting and Hot Water Heat Pump upgrades.

Total Commercial Projects
1000+

Total MW System Installed
50MW+

Carbon Offset Reduction
201,192Tonnes



Vision: Creating greater energy independence for businesses across Australia

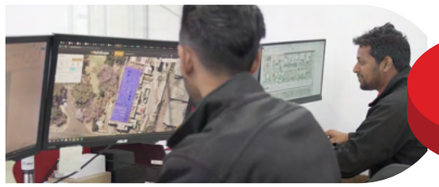
At the heart of our vision is the empowerment of businesses across Australia through a revolutionary approach to energy delivery. Given the escalating energy costs faced by Australian businesses, coupled with rising operating expenses, maintaining competitiveness is an increasingly challenging feat. Neglecting action on energy independence could burden businesses with soaring commercial energy needs. At Kuga, we champion energy independence, offering local businesses the means to take control of their energy future. Our suite of energy efficiency solutions is designed to help businesses reduce costs, reinvest in their operations, sustain profitability, foster growth, and uphold sustainability principles in the face of evolving energy landscapes.

Yours Sincerely,

John Kurta
CEO

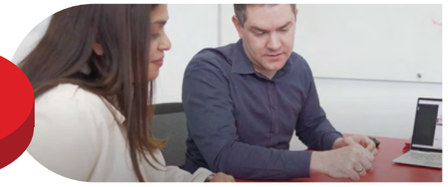
PEOPLE ARE KEY TO OUR SUCCESS

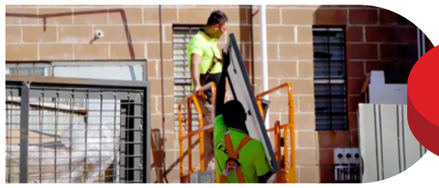
Product Engineering Design & Procurement



Solar System Design / Engineering

Surveys, Studies, Permits & Approvals





Project Management & Construction

Commissioning & Handover

Post Installation Monitoring & Client Services

Our Process and Methodology Brochure

ENERGY SPECIALISTS

John Kurta

CEO / MANAGING DIRECTOR

Leading the charge that shakes and shapes the industry, John has spent his life in the energy industry with more than 15 years of experience in the field with 12 years in AGL. Now he is the CEO of Kuga Group, one of the fastest-growing companies in the industry. John had a vision and thought if he could find a group of people that could see our vision we can achieve something great, something special, something unique and something big.

Clement Doudet

GENERAL MANAGER

Clement joined KUGA in 2017 to fully enhance business relationships, develop the sales department and help build Kuga to become one of the largest privately owned solar companies in Australia. Today, Clement leads individuals and teams to their fullest potential that enables KUGA to be efficient and retain market leadership. Entering new markets and breaking records is what Clement comes to work for.

Grant Jamieson

SALES DIRECTOR

With a background in Engineering and after market service contracts, he has long been aware of the biggest lifecycle cost of owning machinery is the energy consumption. Over his tenure in the Commercial team, he has witnessed rapid changes in the renewables sector and has been instrumental in continually refining the approach to market. Grant currently heads up the commercial and partnership team nationally.

Edward Lyle

PARTNERSHIP MANAGER

With a background in Energy Industry, Edward joined KUGA as a Partnership Manager. Edward previously worked in Solar at Origin Energy, and more recently at Flow Power in C&I Electricity, helping customers to navigate the wholesale markets and Corporate Solar PPAs. Bringing his extensive knowledge about the energy markets to KUGA, Edward's goal is to help businesses to get the most out of commercial solar.

ENGINEERS & ESTIMATORS

Sarvani Kudumula

TENDER ENGINEER MANAGER

As a Tender Specialist, Sarvani has played a vital role in the expansion of KUGA in the Australian solar industry. She is CEC accredited Electrical Engineer and has been in this industry for many years. Sarvani has won many solar carport projects this year and has brought many construction builders onboard such as Hansen Yucken, ADCO. Sarvani has been a major contributor in getting the IPART & VEET accrediation for KUGA. Sarvani has great attention to detail and project management skills which aids business achieve higher goals.

Aravind Boddula

PROJECT ENGINEER

Aravind is a young, dynamic and passionate Electrical Project Engineer with CEC accreditation. He manages multiple commercial and Industrial solar projects as per the project requirements and adherence to Australian Standards for solar installation design. He ensures all the tasks to be accomplished with quality as per timeframes. He is a great addition to the team with varied skills that helps business in project execution. Aarvind is highl ymotivated and pays great attention to detail to his administartive tasks.

Adam Mohsin

PROJECT ENGINEER

Adam is very passionate, cheerful and dedicated individual with substantial set of skills in the electrical engineering. Adam gained CEC Accreditation and extensive experience in Solar PV design, commissioning, operations, and maintenance in both commercial and industrial division. He is highly motivated and gets things done by learning new opportunities coming his way. Adam wants to be at a position where he manages all the engineers under his team.

PROJECT DELIVERY

Francis Futsek

PROJECT MANAGER

Francis commenced his career in the solar business 6 years ago and started working off in the electrical field on the tools such as installing solar for number of years. Later he made a transition to the operations and project delivery for KUGA. Our operation team is at the heart of our organisation. He has the ability to work in high pressure and fast paced enviornment. Francis leads the tempo of our operation floor with young and dynamic energy to deliver a seamless and enjoyable experience for our clients and partners.

Jonathan Lowe

PROJECT MANAGER

Jonathan is an A-grade electrician, CEC Accredited installer with 11 years experience across multiple fields as a electrician. Deciding on a career change at 35 starting an electrical apprenticeship after 17 years in the insurance industry and leaving the industry as a Business Analyst completing Project Management and Competitor Analyst for a leading Insurer. He is passionate about the environment lives for the outdooors and is a avid hiker.

Trant Beacom

SITE MANAGER

Trant is a qualified electrician with CEC Accreditation in design and installation. With 5 plus years of experience in the commercial solar industry, delivering a wide range of projects to suit the customers' needs. High-end workmanship with attention to detail with focus on safety. Trant has contributed to a wide range of commercial new builds including pharmaceutical, hospital/nursing homes (body protect), sporting complex, schools and air force base. Scopes of work consisted of main installations, mechanical,light & power, data, and large -scale grid connected solar systems.

Justin Lumsden

PROJECT MANAGER

Justin commenced his career in solar in 2013, giving him a decade of practical experience in the solar industry. He is responsible for overall management of operations and project delivery across the state of Queensland. Since graduating from Install Team to Project Manager, Justin has delivered MW+ projects within tight time frames, all while providing enhanced and comminication and strong leadership for his growing team.

LGC/VEEC PROJECTS

LGC/VEEC PROJECTS

Ballantyne Dairy Innovation

1408MWh
Annual Saving

1200kW
Commissioned

1402.37 Tonnes
CO_2 Reductions

Scope of work

- KUGA Electrical was selected as the successful EPC Partner for a 1.2MW solar installation

Solution

- Ballantyne needed a supplier with the capability to install by the end of financial year. The turnaround from the initial site inspection through to practical completion was 10 weeks.

Delivery Outcome

- KUGA installed 2667 solar panels, covering most of the existing roof space. This provided the Altona site with a total system capacity of 1.2MW, delivering 1.39GWh of energy every year, or about 32% of the facility's total usage.

Etex Australia Pty Ltd

1740MWh
Annual Saving

1450kW
Commissioned

1733.04 Tonnes
CO_2 Reductions

Scope of work

- Etex Australia has awarded the first of its 7 sites roll out to Kuga Electrical.

Solution

- Through diligent sites visits ensuring electrical compliance are met and site specific constraints, Kuga Electrical has developed a solution based solar system that will cover 34% of the entire site energy needs and contributing to Etex's sustainability targets.

Delivery Outcome

- Kuga Electrical proposes to install solar PV systems for Etex's Altona site with total system capacity of 1450kw delivering 1,734GWh of energy to sites per year with an onset consumption of 34% of site's energy needs.

STC PROJECTS

St. Francis of Assisi - Primary School

126.67 MWh
Annual Saving

99.9 kW
Commissioned

126.17 Tonnes
CO_2 Reductions

Scope of work

- KUGA Electrical used their expertise on the specifics of the school to install a 99.9kW solar system

Solution

- The panels were connected using SolarEdge inverter technology due to their very low roof voltages and ability to cut DC power on the roof.

Delivery Outcome

- The solar install has been registered with “Solar Schools,” which provides the monitoring and funding to schools that install solar. The live production data is used to educate students on renewable practices and the benefits of solar energy.

OZ Ten Pin Bowling Centres- Multi Site Rollout 460kW

540.60 MWh
Annual Saving

460 kW
Commissioned

538.44 Tonnes
CO_2 Reductions

Scope of work

- KUGA Electrical used their expertise for the OZ Ten Pin Bowling Centre to install a total of 460kW of solar panels.

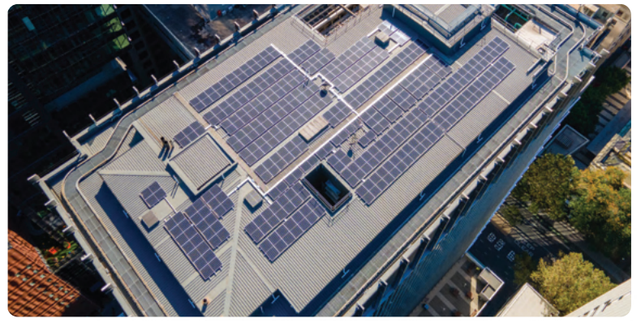
Solution

- The main purpose of installing solar energy on each centre was to cut down on electricity consumption costs.

Delivery Outcome

- The owner of five bowling centres explains how her electricity bills were halved through the install of solar energy on each centre. Oz Ten Pin Bowling centre saves nearly 50% off their first bill after the solar installation. This type of savings makes a tremendous effect on our business KUGA installed Oz Ten Pin’s multi sites around Narren Warren 100kW, Epping 100kW, Chirnside Park 100kW, Greensborough 80kW and Point Cook 80kW.

STC PROJECTS



BATTERY & OFF-GRID PROJECTS

Off grid solar systems are a way or powering a property or business completely independently from the main electricity grid. An off grid power system consists of four main elements:

- roof or ground mounted solar panels
- a battery bank to store energy
- an integrated back-up power supplu (such as a diesel generator, wind turbine or hydro); and
- an inverter and/or charger which acts as the interface between the different inputs.

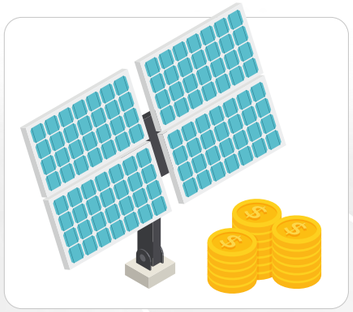
Advantages of Off Grid Solar Systems

Commercial off grid power systems have several advantages. The main benefits of off grid systems are:

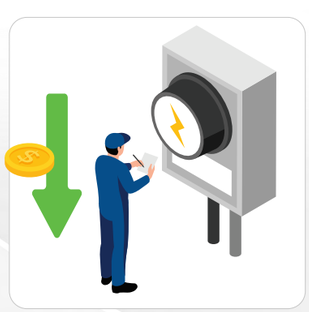
- Can be cheaper than connecting the property to the grid
- No electricity bills
- Complete energy independence
- Avoid grid power outages
- Not exposed to electricity price rises
- Low maintenance
- Known running costs - no unexpected price inflation
- Built-in resilience for 24/7 operation, 365 days of the year

PPA - A Perfect Solution for an Off Grid System

A Solar Power Purchase Agreement (PPA) is a long- term contract to purchase the electricity that is generated by the solar panels installed on your premises. This arrangement is made between a retailer (or generator) and a purchaser (or off-taker) for the purchase of electricity. Electricity is generated by the PV system and is charged at a kWh rate for the total production of electricity by the consoles or by the site consumption. This is known as either a Production or a Consumption Solar PPA. The arrangement is typically between 7 to 30 years and usually has an annual price increase for the duration of the term. This consensus has no upfront cost, however, the purchaser needs to buy the kWh as agreed in the PPA agreement.



We find you a Solar PPA Provider for your renewable energy project. We use this investment to install a system on your roof.



As the system produces energy, it generates revenue by selling you the energy at a very low rate.

At the end of the contract the Solar PPA provider gives you the system for free.

BATTERY & OFF-GRID PROJECTS

Ellinbank Dairy Innovation

125.15 MWh
Annual Saving

102 kWh + 99 kW
Commissioned

124.65 Tonnes
CO^2 Reductions

Scope of work

- Ellinbank Dairy Research Centre is a fully functional dairy farm located in Gippsland, Victoria. It's wholly run by the Department of Jobs, Precincts and Regions to provide valuable research to the industry and assist in making dairy farming more profitable and sustainable within Victoria. Dairy farming, by its very nature, is environmentally taxing. Not only is the processing of milk an energy-intensive process, but the livestock themselves contribute to greenhouse gases. Ellinbank is dedicated to the ambitious goal of becoming a complete carbon-neutral farm with the help of our solar battery storage system. So far, they have achieved huge steps toward their target with initiatives such as electric farm vehicles.

Solution

- Part of the next steps the Research Centre took was to reduce their reliance on electricity from the grid. They went to the market seeking a 99kW renewable energy source combined with a 30kWh solar battery. This power unit was later upsized to 100kWh, making it one of only a small handful in Victoria in that size range. In recent news, Victoria has announced it will be expanding its renewable energy depository volume to 6.3 GW in the hopes to provide sufficient enough power to homes across half of the state by 2035. The government is planning to give $119 million to a 125MW solar battery inverter that will be placed in Murray Renewable Energy Zone, found in Victoria's northwest between Bendigo and Redcliffs. They are also in the works to pay out $38.2 million on four different clean energy initiatives, putting $19.3 million into two bioenergy initiatives at farms in Barwon and our client, Ellibank Dairy Research Centre in Gippsland.

Delivery Outcome

- KUGA Electrical won the tender and set about designing the solution. The solution had to be designed such that it was accessible for educational purposes, and that the battery operated most effectively to complement the farm's energy usage profile. KUGA Electrical supplied a solar battery storage installation to assist in this goal and showcase the technology to other Australian farmers. The final battery solution installed by KUGA Electrical was the Alpha ESS Storion T 30, with 102kWh of usable storage capacity. KUGA Electrical supplied a solar and battery storage installation to assist in this goal and showcase the technology for other Australian farmers.

GROUND MOUNT SYSTEMS

A ground-mounted solar power system is just what it sounds like - a system of solar panels that are mounted on the ground on your commercial property, rather than on the roof of your business site. Ground-mounted solar panels can be installed any place on your commercial property that has sufficient open space and good sun exposure. The panels can be placed anywhere from a few inches to a few feet off the ground, depending on how the racking system is set up. The panels feed power to a solar inverter, which is located either on the mounting system behind the panels or in the commercial property.

What are the different types of Ground Mount System?

Fixed Tilt System

The fixed tilt non-tracking solar panel seen here is the simplest and least expensive solar panel mount. This type of mount remains fixed in place, and does not track the sun across the sky during the day, and usually faces towards the southern sky at an angle that is equal to the latitude of the location of the panel. Standard setup that incorporates panels affixed to metal framing. This framing is driven into the floor to set the panels at a fixed, optimal angle for exposure.

Single Axis Tracking

Tracking systems have motors that pivot the panels throughout the day to keep them tilted at the optimal angle to the sun. Like the single tilt, single axis tracking ground mount systems are installed through support being driven into the floor. The major difference in these setups is in the tracking system, as the name suggests, these panels are able to move on a single axis – whether it be north-south, or east-west.

Ballasted System

In some circumstances it is preferred not to penetrate the ground at all. Solar panels can also be installed using concrete blocks which sit on the ground and their weight holds the system in place. Offering a quicker installation than the pile-driven setups, a ballasted array is the perfect solution for troublesome terrains such as landfills or loose-soil fields. KUGA Electrical can assist you in deciding which setup is suitable for your commercial needs.

GROUND MOUNT SYSTEMS

OMYA Australia - Fixed Tilt System

162.4 MWh
Annual Saving

100 kW
Commissioned

161.75 Tonnes
CO_2 Reductions

Scope of work

- A 100kW ground mount solar project at an OMYA quarry site in NSW. Agile Energy financed the system via a Power Purchase Agreement. Bifacial panels were used, maximizing power production from both sides. Site was optimized with white stones for reflection and engineered for wind load.

Solution

- KUGA managed the Council DA application, Civil Engineering, trenching, and installation of Longi Solar Bifacial panels and Sungrow Inverters. Due to the mine's layout, extensive trenching was required to connect to the main switchboard, requiring careful placement of equipment. The bi-facial panels exceeded expected performance, generating over 10% more power than mono-facial panels.

Americold Laverton - Ground Mount System

2608MWh
Annual Saving

1560 kW
Commissioned

2,086.4 Tonnes
CO_2 Reductions

Scope of work

- KUGA Electrical is expanding solar capacity at Americold's Laverton facility by installing a 1.56MW ground-mount solar system. This includes Astronergy 625W Bi-Facial panels and Sungrow SG110CX inverters, aiming for 2608MWh annual generation and significant CO2 savings.

Solution

- The project involves engineering, procurement, and construction tasks, including designing, sourcing components, conducting works, managing personnel, schedules, risks, regulatory compliance, and documentation. KUGA Electrical's installation of the advanced solar system demonstrates its engineering prowess and commitment to quality, promising substantial energy production and environmental benefits.

SOLAR CARPORT

Solar carports are comprised of a purpose-built steel structure that holds a canopy of solar panels, as well as a separate shaded or enclosed structure to house the inverters and grid protection. Solar carports create shade over the car park area in addition to generating renewable electricity. Solar car ports allow businesses to utilise car park areas to achieve financial and sustainability goals, whilst also providing a nice, shaded canopy for car park visitors.

Benefits of Solar Carports

- There is a desperate need for an increase in clean energy, such as solar power. Not only do solar carports generate solar energy but they also provide shade for vehicles. They are space-efficient, because they allow users to install solar panels without the need for roof or ground surface

- Solar carports are more flexible than rooftop solar installations. This is because you aren't limited by the design of your roof. The custom-built design means you can install as many solar panels as you want as long there is space for solar carport.

Solar Carport Market Opportunities

Kuga sees a significant market opportunity in solar carports. We are allocating resources towards a number of existing solar carport projects as well as building our capabilities for future larger and more complex projects, including solar car ports that feature CCTV, emergency lighting, sky lights and other custom features.

SOLAR CARPORT

Barwon Prison

1070 MWh
Annual Saving

770 kW
Commissioned

1065.72 Tonnes
CO_2 Reductions

Scope of work

- Kuga Electrical has designed solar carport systems to deliver a high-quality solar PV system meeting Australian Standards, codes, CEC guidelines and Principal tender requirements with Barwon Prison product warranty specifications.

Solution

- Kuga Electrical has evaluated the tender for the design, supply, installation, and operation of solar carport system and EV Charging solution to Barwon Prison expansion project. The carport is built with high-quality SunPower Bifacial Panels, backed by a 25-year product warranty, ensuring longtermreliability and performance.

Wagga Wagga Hospital

1213.4MWh
Annual Saving

818kW
Commissioned

1208.55 Tonnes
CO_2 Reductions

Scope of work

- Kuga Electrical has evaluated the tender for the design, supply, installation, and operation of Wagga Wagga carport system comprising Multistorey Carpark (MSCP), Docker Street On-grade Carpark and Solar Roof top systems to Support Services Building and Mental Health Building of Wagga Wagga Base Hospital.

Solution

- This state-of-the-art system contains Docker Street On-grade Carpark and incorporates Solar Rooftop systems to support the Services Building and Mental Health Building. The remarkable solar system generates an impressive 1213.4 MWh of clean, renewable energy annually. Kuga Electrical and ADCO have provided a solution that transformed Wagga Wagga Hospital into an eco-friendly healthcare facility.

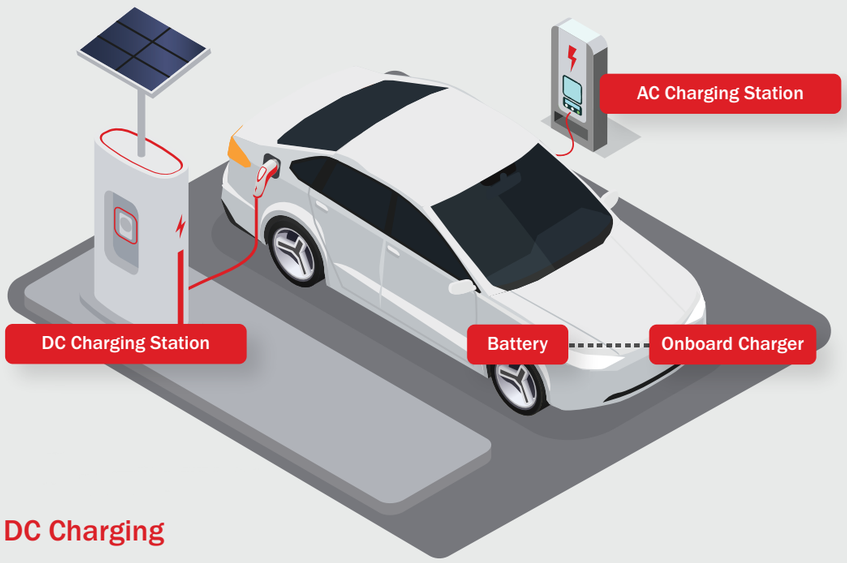
SOLAR CARPORT

Are Solar Powered EV Chargers Worth It?

You've seen them within parking structures, in parking lots, and even in some of your local plazas. Electric vehicle chargers are more commonplace than ever before, with more business owners and property owners using them to provide an easy resource for EV drivers to charge their vehicles.

On a global scale, electric vehicles are taking over, with more and more people switching over to electric cars than ever before. Because of this, solar-powered EV chargers are sprouting up everywhere.

In this article, we're going to be diving into Solar Powered EV Chargers and their benefits for commercial properties.



AC and DC Charging

How Does A Solar EV Charger Work?

Before we get into certain specifics, we would like to break down how commercial Solar EV chargers work, and how they provide a dynamic energy system for EVs.

When photons (sunlight) hit solar panels, electrons are removed from their atoms. The conductors within these solar panels guide the electrons through a circuit, which then generates direct current (DC) energy.

With multiple panels holding multiple cells, they form a solar array which gives you a bulk amount of energy. The DC energy is then guided into your inverter unit, which then converts DC energy into usable alternating current (AC) energy.

EV CHARGERS

Primal Surfacing

1070 MWh
Annual Saving

139 kW Solar + 110kW EV
Commissioned

1065.72 Tonnes
CO_2 Reductions

Scope of work
- Primal surfacing has strong carbon reduction targets set by their parent company Colas group.

Solution
- This includes a number of Electric trucks to be rolled out across their fleet. As the next step in the process, they engaged KUGA to install a 99kW and 30kW solar system.

Delivery Outcome
- The 99kW system was intentionally over-sized to allow for the install of 5x EV charging points which KUGA mounted in their staff and visitor carparks.

Momentum Foods

1264.11 MWh
Annual Saving

60 kW Solar + 20 kW EV
Commissioned

1260 Tonnes
CO_2 Reductions

Scope of work
- KUGA has a long fair relationship with Momentum Foods where they firstly installed 30kW

Solution
- We again installed a 30kW solar system which allows him to do is offset the running cost of his large freezer that he recenlty bought and we also installed 20kW EV charger for the car which is free charging of his car with the surplus solar.

Delivery Outcome
- Momentum Foods are able to save quite lot of money and have seen significant reduction in their bills

CONSTRUCTION PROJECTS

ESR Horsley Logistics Park - Hansen Yuncken

494.74MWh
Annual Saving

330 kW
Commissioned

492.76 Tonnes
CO_2 Reductions

Scope of work

- KUGA won this project by completing Solar PV for Lot 201 and 202 for 4 tenancies for 330kW.

Solution

- As per ESR's design brief, KUGA installed Solar PV with 25 Year Warranty Sunpower panels.

Delivery Outcome

- The operations have been meticulously programmed in the construction plan and Kuga Team closely worked with the Hansen Yuncken to ensure we kept up with their tight installation schedule to make sure that the ESR project was handed over on time.

Charter Hall QLS Logistics- Hansen Yuncken

656.2MWh
Annual Saving

500kW
Commissioned

653.58 Tonnes
CO_2 Reductions

Scope of work

- Kuga Australia won this Charter Hall Holdings Pty Ltd - QLS Logistics project for building 500kW Solar PV System in Blacktown, NSW through Hansen Yunken (Builder).

Solution

- Kuga ensures high performance and compliance with health and safety guidelines for its installers.

Delivery Outcome

- Kuga successfully completed the project despite facing heavy rains and damp site conditions during the installation. Kuga Electrical is delivering total end-to-end solutions to the facility.

CONSTRUCTION PROJECTS

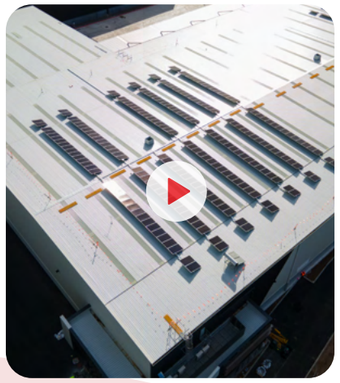
MEDIA

See our recent installations on our YouTube channel

1450 kW ETEX Australia

Megawatt Installations

1300 kW ABBE Corrugated



330 kW Hansen Yuncken

500 kW Charter Hall

100 kW Corrimal High School

1270 kW G & K

1450 kW ETEX Altona

1022 kW Americold

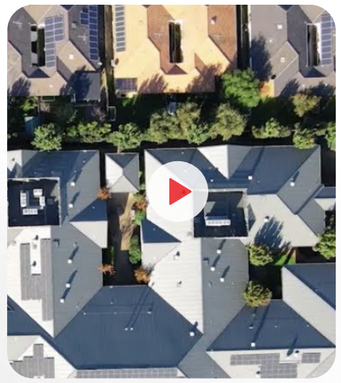
1200 kW Ballantyne

230 kW Regal Rexnord

100 kW Bathurst Quarry

200 kW Concord Oval

730 kW Cromfordfilms



845 kW Heritage Care

100 kW DEKA 22 Storey

99.9 kW Sabco Australia

200 kW DFO South Wharf

Follow us on social

We regularly post new contents on our social media channels, follow us for the latest news in the industry.

KUGA
ELECTRICAL

4 Bridge Road,
Keysborough
VIC 3173

6 Turbo Road,
Kings Park
NSW 2148

31 Chetwynd St,
Loganholme
QLD 4129

402-A.1 ICITE Bldg.
Eastwood Cyberpark
Philippines 1110

13 58 42 | 13 KUGA

www.13kuga.com.au

Licence numbers: VIC: 27103 | NSW: 318148C | QLD: 88831 | SA: PGE 314984 | TAS: 784865990 | ACT: 20211556
ABN 39 616 409 584 | REC NO. 27103 | Contractor Licence Number: 367411C | Contractor Licence Number: PGE 303674