

next generation electrical



About NG/E



Next Generation Electrical (NG/E) is a national Engineering, Procurement and Construction (EPC) contractor delivering renewable energy solutions across Australia. With in-house capability across solar PV, battery energy storage, microgrids, hybrid systems and high voltage works, NG/E offers clients a fully integrated delivery partner from design through to commissioning.

Victoria Power Networks

Powercor
Australia

Citipower

Powercor
Network
Services

Energy
Solutions
(Beon)

Australian
Energy
Operations

United
Energy

Energy
Development



NG/E is 50% owned by Beon Energy Solutions, a wholly-owned subsidiary of Victoria Power Networks, the holding company for Powercor, CitiPower, United Energy and Beon Energy Solutions.

265MW+

Solar PV Delivered



95MW+

BESS Delivered



Nationwide

EPC Services



Safety First

The safety of our employees and customers is of the utmost importance to us. We provide a work environment where everyone goes home in the same way they arrived.

Customer Focused

NG/E works closely with our customers, aligning needs and expectations. We're not just electricians, we're project managers and your energy solution provider.

Accredited

NG/E are ISO accredited in safety, quality and environment. The team is also Clean Energy Council (CEC) installers and designers. This adds further assurance to our clients as to the quality and integrity of our work.



Forward Thinking

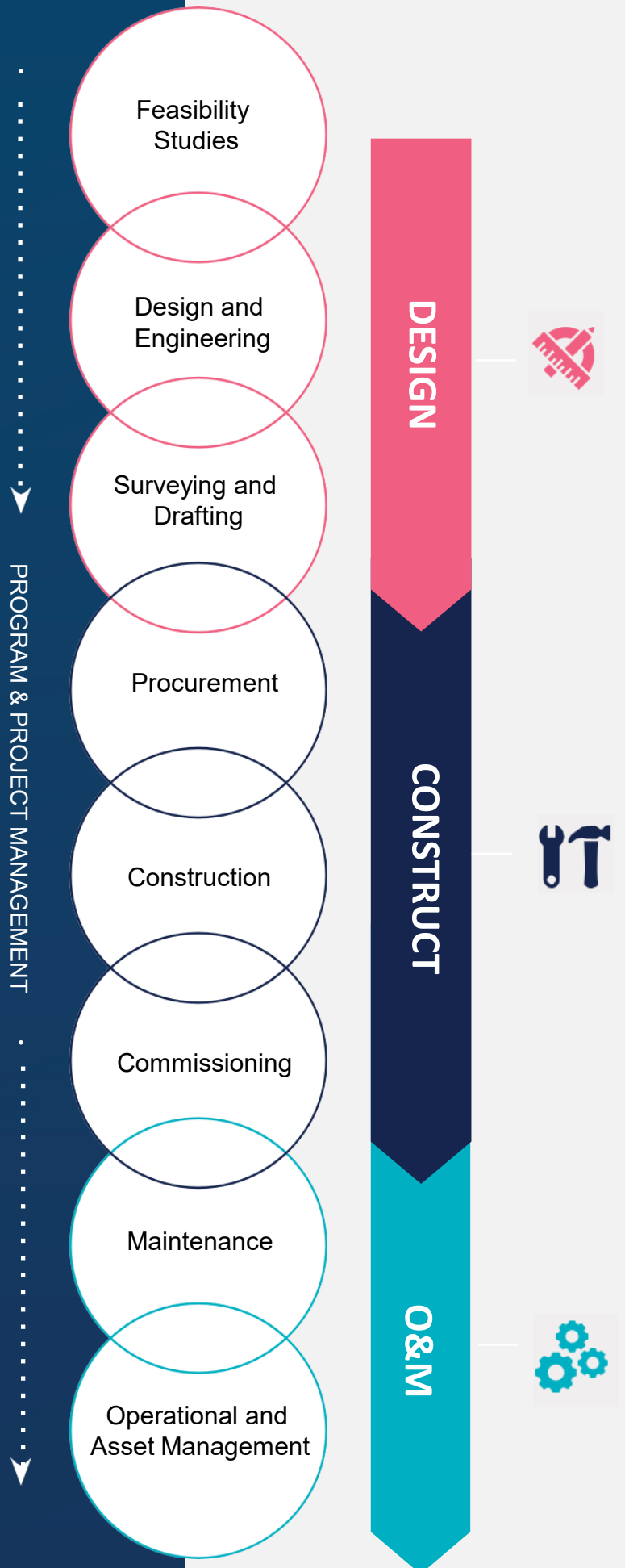
The team at NG/E are highly qualified experts that understand current market trends, which helps drive best practice outcomes and savings for our customers.

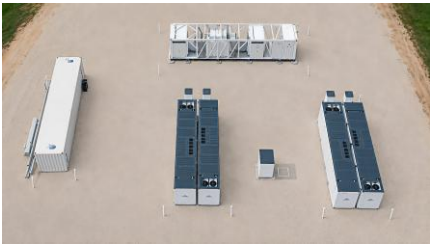
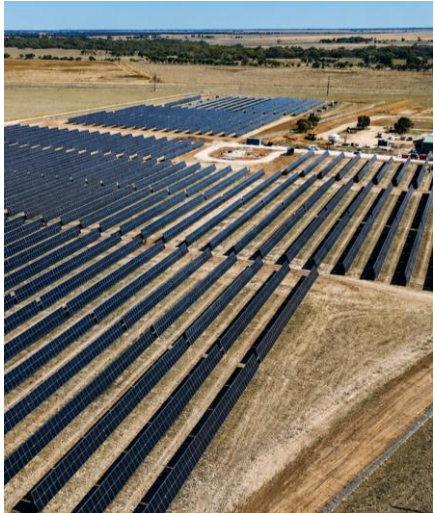
Ingenuity

NG/E are committed to staying ahead of the game and providing you with the latest solutions and technologies available.



OUR SERVICES





Scope of Works

Design and construction of DC Coupled BESS and solar across 3 sites in Griffith, Tabbita and Murrumbidgee, NSW.

System Size

21MWp (PV) / 33MWh (BESS)

Key Equipment

Sungrow BESS / MVPS, Nextracker 1P, JA / Trina Modules

Key Outcomes

- All three sites completed within 9 months, with DC electrical and mechanical installation self-performed by NG/E's internal team.
- Optimised layout and location of key BESS and electrical infrastructure across each site to improve construction efficiency and performance.
- NG/E continues to provide O&M services across all sites, maximising system availability and revenue capture.



Scope of Works

Design and construction of a DC Coupled BESS integrated with a single axis tracking solar system in Nhill, VIC for GWM Water.

System Size

Key Equipment

6.5MWp (PV) / 6.5MWh (BESS) EVO BESS, SMA MVPS, Nextracker 1p, Trina Modules

Key Outcomes

- Engineered a DC Coupled BESS solution enabling the asset to function as a carbon neutral net generator, offsetting 70% of the client's electricity consumption through a virtual PPA.
- BESS enables GWM Water to participate in FCAS and wholesale arbitrage markets, generating ongoing revenue and maximising commercial return.
- All DC electrical and mechanical installation self-performed by NG/E's internal construction team, ensuring quality and, construction and cost efficiency.
- Coordinated design and installation of a custom control system by AZZO, integrating BESS and solar monitoring with GWM Water's broader SCADA network and the grid.



Scope of Works

Design and construction of solar PV across 7 systems at 4 campuses, including BESS, as part of La Trobe University's Net Zero programme targeting carbon neutrality by 2029.

System Size

3.8MWp (PV) 4.9MWh BESS

Key Equipment

EVO Power BESS, Fronius Inverters, Canadian Solar Modules, Solar Carport Structures

Key Outcomes

- Delivered a complex multi-site rollout across 4 campuses, encompassing rooftop, carport and ground mount solar configurations alongside a DC Coupled BESS.
- The integrated BESS enables energy storage and load shifting, directly supporting La Trobe University's carbon neutrality target.
- All construction was completed during university holiday periods, minimising disruption to students and staff.



Scope of Works

Design and construction of a DC Coupled Vanadium Flow BESS integrated with a fixed tilt solar PV system, located near Bungama Substation, Port Pirie, South Australia.

System Size

6MWp (PV) / 8MWh (BESS)

Key Equipment

Invinity VRFB, SMA MVPS, S-Rack Fixed Tilt, Trina Modules

Key Outcomes

- NG/E delivered the first and largest on-grid installation of a Vanadium Flow Battery in the southern hemisphere, securing \$7.5M in ARENA funding and registering the asset as a fully scheduled generator with R1 and R2 compliance with AEMO.
- The DC Coupled architecture integrates the Vanadium Flow Battery directly to the solar DC bus, optimising round-trip efficiency and maximising the commercial and grid support capability of the asset.
- The BESS leverages significant intraday price variation in South Australia, time-shifting solar generation from midday to peak morning and evening periods to maximise revenue through FCAS and wholesale arbitrage market participation.
- The project produces approximately 10GWh of dispatchable solar power annually, delivering network stability and supporting South Australia's transition to a low carbon economy.

Corryong Islandable Microgrid



Scope of Works

Design and construction of an islandable microgrid consisting of an AC Coupled BESS and generators with black-start islanding capabilities in Corryong, VIC.

System Size

5MWh (BESS) / 3MW (Generators)

Key Equipment

EVO BESS, Ingeteam PCS

Key Outcomes

- NG/E is developing this project in partnership with Mondo to enable black-start islanding capabilities, designed to power the Corryong electrical grid during outages for up to 5 days and supply electricity to over 900 properties during extreme weather events.
- A bespoke BESS design has been engineered to deliver the exact storage duration required to back up the target load, ensuring reliable and precise energy supply during grid outages.
- NG/E is coordinating the integration of the BESS facility and the adjacent diesel power station, enabling seamless connection and control across both assets for a fully coordinated microgrid response.



Scope of Works

Design, supply and installation of a solar farm with BESS integrated into an existing generator system to provide a hybrid renewable energy microgrid, including HV works, telemetry and SCADA upgrades.

System Size	Key Equipment
2.9MWp (PV) / 1MWh (BESS) / 4.8MW (Generators)	SMA String Inverters, PEG East/West Mounting System, Longi Modules, ComAp Control System

Key Outcomes

- One of the largest off-grid solar and BESS systems in South Australia, connected to a private HV network providing reliable, long-term renewable power to 5 remote indigenous communities.
- NG/E specified a PEG East/West mounting solution to address site space constraints and minimise vegetation maintenance requirements across the red earth terrain, optimising the system layout for the unique site conditions.
- A ComAp control solution was selected for seamless integration with the existing generator system, with generators operating in grid-forming mode to ensure stable and reliable power delivery across the microgrid.
- NG/E successfully managed complex project logistics including raw material supply, contractor availability and coordination in a highly remote location.



Scope of Works

Design and construction of a full off-grid hybrid renewable energy system integrating solar PV, BESS and diesel generators.

System Size

615kWp (PV) / 600kWh (BESS) /
800kVA (Generators)

Key Equipment

Sungrow BESS, Blue Diamond Generators, Fixed Tilt Mounting System, ComAp Control System

Key Outcomes

- The integrated microgrid solution enabled FGB to have a fully operational facility within one year, avoiding a more costly grid connection that would have delayed operations by a further 2 years, with solar and BESS forming the majority of facility supply and generators retained as backup to minimise ongoing fuel costs.
- A ComAp integrated control solution was deployed, with all control wiring completed in-house by the generator supplier to reduce on-site installation costs and programme risk.
- Development approval was secured prior to design commencement, accounting for a 120m cultural heritage easement off an existing creek, with DA works completed in parallel with design to maintain programme.
- A modular BESS configuration was selected for cost and programme efficiency, with careful consideration given to the additional control complexity of managing multiple units in tandem compared to a single containerised solution.

VPN Community Batteries



Scope of Works

Design, civil and electrical construction, commissioning and SCADA integration of three network-connected community-scale BESS across Tarneit, Maldon and Carrum Downs for Victoria Power Networks (Powercor / United Energy).

System Size

Tarneit – 120kW / 360kWh
Maldon – 100kW / 290kWh
Carrum Downs – 100kW / 190kWh

Key Equipment

EVO Neo Series BESS

Key Outcomes

- The Tarneit battery stores excess rooftop solar generated during the day to supply up to 170 nearby homes during peak evening periods, enabling an additional 129,600kWh of solar exports per annum across the local network.
- The Maldon battery services over 50 properties during peak periods, supporting one of the highest solar penetration areas in the Powercor network and deferring the need for costly network upgrade works.
- NG/E delivered the first network-owned ground-mounted community battery within the United Energy network at Carrum Downs, enhancing local grid stability and increasing distributed energy resource penetration across the network.



Scope of Works

Design and installation of turnkey AC Coupled BESS across 5 sites in the Riverland Region, SA, on behalf of Central Irrigation Trust (CIT) and integrated into Enel X's Virtual Power Plant.

System Size

7MWh (across 5 sites)

Key Equipment

Sungrow ST2007kWh (x3), EVO Power NEO 500kW (x2)

Key Outcomes

- The largest battery energy storage project of its kind in Australia at the time of delivery, aggregated into Enel X's Virtual Power Plant to enable AEMO to better manage supply and demand across the South Australian grid.
- The project provides new revenue streams for both Enel X and Central Irrigation Trust through participation in FCAS and wholesale energy markets, while boosting energy security across the Riverland region.
- All sites are managed by Enel X's proprietary Distributed Energy Resources Optimisation Software (DER.OS), enabling ongoing participation in energy arbitrage markets to maximise commercial return.
- The project demonstrates NG/E's capability in delivering multi-site distributed BESS programmes, incorporating both Sungrow and EVO Power battery technologies across a single coordinated programme of works.



Scope of Works

Design and construction of a AC Coupled BESS at Chirnside Park Shopping Centre for Shell Energy, forming a key component of the GPT Group's Smart Energy Hub to reduce grid reliance, lower operational costs and support carbon neutrality.

System Size

1MW / 2MWh (BESS)

Key Equipment

Sungrow BESS

Key Outcomes

- NG/E delivered the BESS installation as part of Shell Energy's Smart Energy Hub, contributing to Chirnside Park becoming the first carbon neutral shopping centre in Victoria and GPT's first Climate Active certified retail asset.
- The BESS supports a 70% reduction in maximum demand levels, contributing to over \$225,000 in annual value through a combination of reduced network demand charges, wholesale market participation and BESS licence fees.
- The BESS operates within a broader integrated energy solution alongside rooftop solar and HVAC LoadFlex technology, all centrally coordinated and operated by Shell Energy to maximise site energy efficiency and revenue.

OUR CLIENTS



Trusted by leading organisations across Australia





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