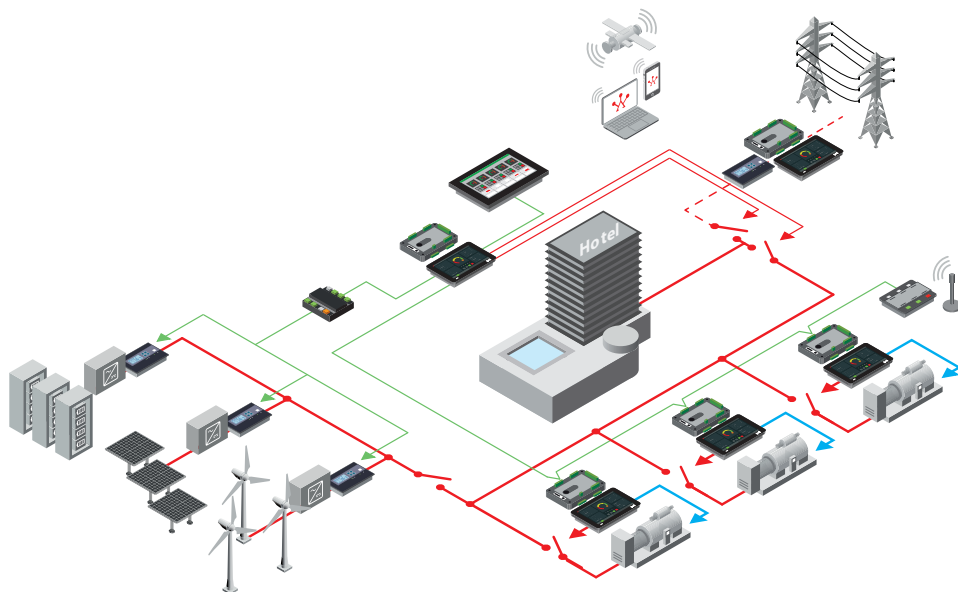


Hybrid Microgrids

The Future of Power Generation



The majority of electricity is generated from a central source, using coal, gas or nuclear, which is then distributed via transmission lines to consumers. However, the traditional power generation model is being put under more and more pressure, and in the interim, consumers are left exposed to power fluctuations, blackouts and more frequent critical infrastructure failures. This includes islands, remote or fringe of grid communities, and even densely populated urban areas with constrained infrastructure.

Distributed power systems, in the form of microgrids, are the future of power generation, providing independence, resilience, and environmental benefits, as well as providing a cost-effective source of supply.

Hybrid microgrids can be any combination of solar, wind, batteries, gen-sets, or any other power source. ComAp controllers with advanced functions specifically designed for hybrid systems can maximise renewable energy without compromising system stability. They continually monitor all energy sources, such as solar, wind, and battery energy storage systems along with multiple gen-sets to provide turn-key hybrid solutions.

Typical Hybrid Microgrid Applications



Utilities



Remote Communities



Islands



Mining



Warehousing and Large Retail



Resorts

About ComAp

Established in 1991 in Prague, Czech Republic, ComAp designs and manufactures control products for power generation and diesel/gas engines, along with associated accessories and software. We're leading the way in providing intelligent electronic control products and solutions that are highly flexible, intuitive and scalable. ComAp has over 550 employees around the world, including subsidiaries in North America, Australia, China, Germany, Italy, India, UAE, South Africa, UK and Singapore.

ComAp Australia is the largest ComAp subsidiary and is well known for the service provided to our customers including design, technical support and independent technical advice and consultation. With a team of experienced engineers located around Australia, we are able to harness technical capabilities and design solutions for a range of applications in renewable energy, industrial power generation and generator and switchgear control.

Key Features of the ComAp System



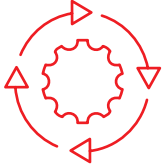
Load Sharing

Intelligent control loops can automatically prioritize and distribute required kW and KVA from multiple power sources such as renewable energy sources, gen-set and mains.



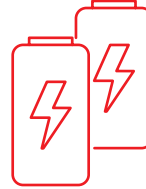
Power Management

Sophisticated power management in ComAp controllers facilitates fast and reliable modulation of power between loads, gen-sets and renewable energy sources regardless of output power rating or equipment manufacturer.



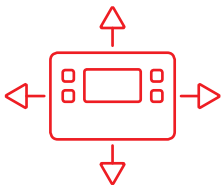
Dynamic Spinning Reserve

ComAp controllers support dynamic spinning reserve by constantly monitoring and adjusting to actual site loads, renewable energy generation and availability of gen-sets. This enables operation at higher fuel efficiencies with lower risk of power outage.



Advanced BESS Management

Battery energy storage systems are supported by ComAp controllers to fully utilize the battery power and capacity for actual load reserve calculations and peak shaving of site demands.



Demand Side Management

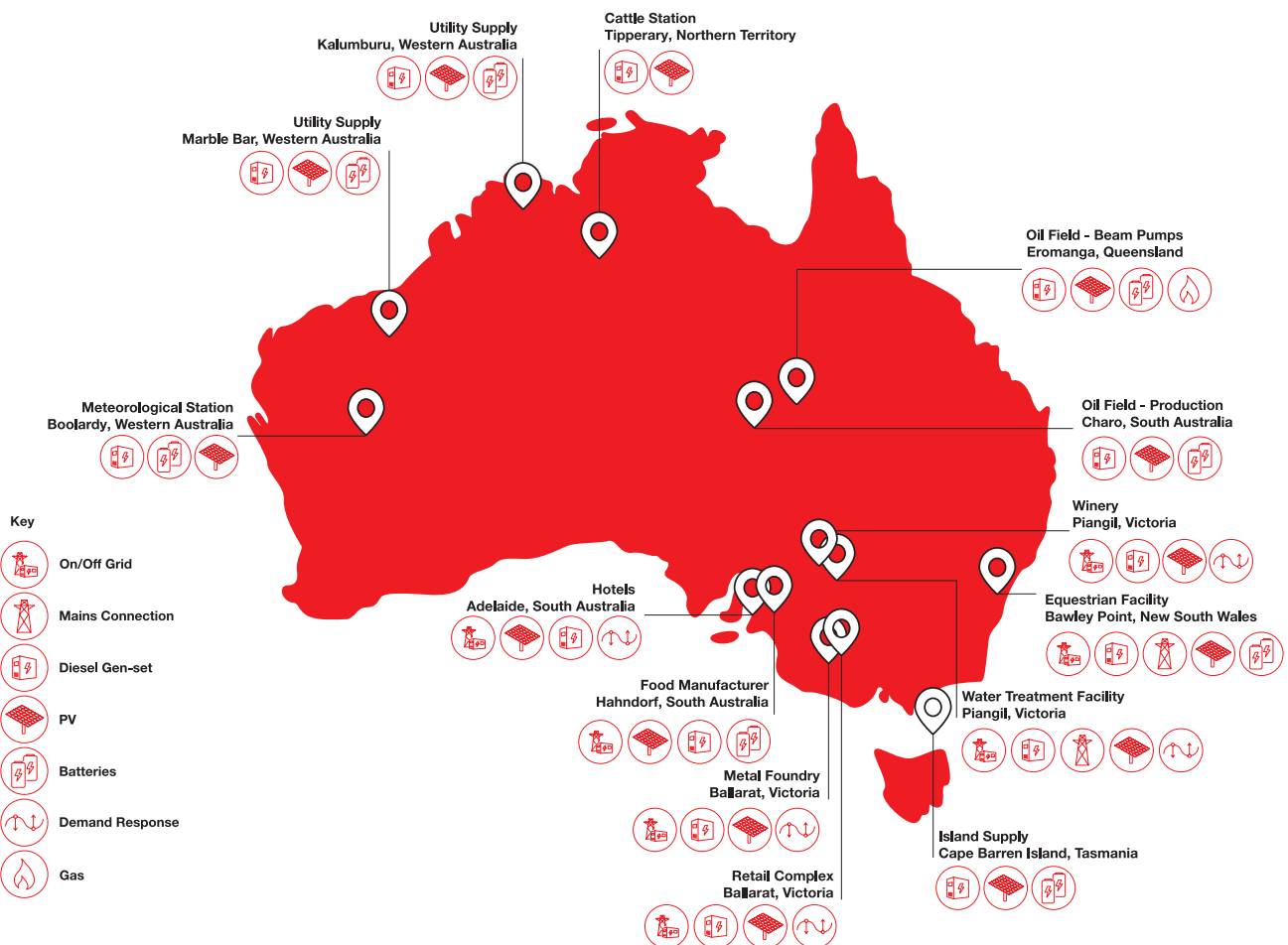
ComAp controllers provides multi-level load commands based on priority and demand logic of specific circuits to maximize renewable penetration and maintain power stability.



Export Control for Grid Connections

ComAp controllers measure and control renewable energy sources to uphold import/export limitations at the point of common coupling to ensure compliance to local requirements.

Example Project Locations



Case Studies

Case studies involving ComAp products and solutions can be found on our website:
comap-control.com/casestudies

Video case studies, including one about our microgrid solution at Willinga Park Equestrian Centre in New South Wales, Australia can be found on our YouTube Channel
youtube.com/comapcontrolsystem



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