

Green Energy Systems Engages Capral Aluminium to Supply LocAl™ Aluminium Extrusions for Global Solar Projects

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Capral Aluminium has entered into a supply agreement with Australian clean-tech company Green Energy Systems (GES). Over the past two years, GES has developed its pioneering [Solar Waves](#) solar deployment system. Capral will supply LocAl™ lower-carbon aluminium extrusions used in its manufacture.

Based in Sydney, Green Energy Systems is focused on delivering a new patented solar deployment system for utility-scale solar projects. Its flagship innovation, [Solar Waves](#), is a modular, prewired solar system designed for rapid installation across a variety of environments—including land, waterways, and agricultural settings.

"The Solar Waves system is designed to be fast to deploy, easy to relocate, and acts more like a fully functioning appliance. At end of life, it can be 100% recycled. It's a smarter way to approach utility-scale solar deployment," said Glenn Carless, Founder and Managing Director of Green Energy Systems.

Unlike traditional solar arrays, Solar Waves is delivered in prewired packages called "Mega Waves", eliminating the need for traditional nuts, bolts, screws, or clamps. Its patented slide-together aluminium frame enables full in-factory robotic automated assembly, reducing on-site work to simple "plug & play" installation while offering excellent corrosion resistance and durability over an estimated 30-year lifespan.

"Our primary focus was to use aluminium as the core material in our system because of its high strength-to-weight ratio and its capacity to be extruded into components with fine engineering tolerances at no additional cost," Carless added.

"Sustainability is central to our approach, and aluminium is the ultimate circular material—infinately recyclable. When we approached Capral to produce the 20 custom extrusions for our unique components, they really got behind our vision. They played a key role in extruding the components that make up our system. It wasn't just about supplying material—they've been critical in helping fine-tune each component and their connectivity."

A key aspect of the project is the use of Capral's LocAl™ Green lower carbon aluminium. With a certified carbon footprint of 8kg CO₂e/kg or less—well below the global average—LocAl™ Green supports GES's commitment to reducing embodied carbon and delivering sustainable outcomes. Manufactured locally and fully recyclable, Capral's LocAl™ complements the Solar Waves system's closed-loop, low-impact design philosophy.

"When Leanne from Capral introduced us to LocAl and highlighted its lower embodied carbon, we knew it was exactly what we were looking for. It aligned with our sustainability goals and business aspirations. We are looking forward to working closely with Capral as they continue to explore further options in this space," added Glenn.

Moreover, Capral's ASI Certification provides additional assurance that the aluminium used in the GES Solar Waves products is responsibly sourced, meeting high standards for environmental and social performance across the supply chain. This certification was also a key consideration for Green Energy Systems, whose commitment to sustainability extends beyond product design to responsible sourcing practices.

"Knowing that Capral's aluminium meets ASI's stringent standards gives us confidence that we are sourcing material from a supplier who shares our commitment to ethical production and environmental stewardship. It matters that our partners are as invested in sustainability as we are," Carless said.

Green Energy Systems' Solar Waves solution has been commissioned for a pilot installation in California, to be deployed over water canals. A collaboration between the Turlock Irrigation District, Solar AquaGrid, the University of California Merced, and the California Department of Water Resources, the pilot forms the final step in selecting a scalable solar solution to potentially cover thousands of miles of Californian canals.

"Being selected as only one of two final options is a significant step forward," said Carless.

"This trial gives us an opportunity to demonstrate what Solar Waves can do—generate clean power, conserve water, minimise land use, and deliver all of that at an affordable cost, in one package."

To meet future demand, GES plans to scale up manufacturing through automated production facilities in both Australia and the United States, supporting the rapid delivery of its system to large-scale solar projects worldwide.

The collaboration between Capral and Green Energy Systems is a compelling example of how Australian innovation, backed by local manufacturing expertise, can help drive sustainable change on a global scale. By using locally extruded aluminium and embracing circular design principles, the Solar Waves project highlights the opportunities that emerge when industry partners align around shared goals for carbon reduction, resource efficiency, and long-term environmental impact.

As the world accelerates toward a cleaner energy future, partnerships like this showcase the real value of Australian-made solutions in delivering scalable, sustainable infrastructure, with responsible sourcing, transparency, and environmental performance at the core.

About Green Energy Systems

Green Energy Systems (GES) is an Australian company transforming utility-scale solar through patented technology that simplifies, accelerates, and expands the possibilities of solar power deployment. GES systems eliminate traditional substructures, bolts, and steel substructure, enabling a faster, stronger, cheaper and more sustainable energy solutions. Read more about the Solar Waves solar deployment system here <https://solarwaves.com.au/>

About Capral Aluminium

Capral is Australia's largest aluminium supplier and a leader in low-carbon aluminium production. Its LocAl® range of aluminium supports the transition to sustainable, circular manufacturing with a lower environmental footprint.

Photography

Photos for use with this release can be downloaded here:

<https://www.dropbox.com/scl/fo/75eqzyovfjo9ne9ibeyb9/AAv9lVtybZtT6j7Ge1A8reA?rlkey=1ajqo96d83qm3dssczu seckg1&dl=0>

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