

Australia-Korea Partnership to Commercialise World-Leading Ocean Energy Technology

Deep Sea Energy and Korea's KRISO Sign MOU to Accelerate Commercial Deployment of Ocean Thermal Energy Conversion (OTEC)

Melbourne, Australia | 16 July 2025 – Deep Sea Energy, an Australian renewable energy venture, has signed a landmark Memorandum of Understanding (MOU) with one of Korea's leading ocean engineering research institutes to accelerate the commercialisation of Ocean Thermal Energy Conversion (OTEC) technology.



Deep Sea Energy Co-Founders Ivan Chua (left) and Brian Lim (middle) speak with Gabriela Brand (right), Second Secretary at the Australian High Commission in Malaysia, during the Sabah International Blue Economy Conference 2024. Deep Sea Energy showcased a 3D model of an offshore OTEC system featuring KRISO's technology and platform design.



Deep Sea Energy, in partnership with the Korean Research Institute of Ships and Ocean Engineering (KRISO), is advancing plans to develop the world's first commercial OTEC plant to produce renewable energy and clean water from the ocean.

The announcement will be made at the 6th Australia-Korea New Energy Forum in Melbourne, a flagship event hosted by the Embassy of the Republic of Korea and the Australia-Korea Business Council. The Forum promotes bilateral cooperation under the Green Economy Partnership Arrangement on Climate and Energy, signed by both governments in December 2024.

Advancing Australia-Korea Energy Cooperation

This partnership between Deep Sea Energy and KRISO contributes to the objectives of the Australia-Korea Green Economy Partnership Arrangement, which promotes bilateral cooperation in renewable energy innovation, industrial decarbonisation, and regional energy resilience and security.

As Australia's first collaboration focussed on OTEC development and commercialisation, this partnership with KRISO sets a new precedent in renewable energy and marks a major milestone in Australia-Korea bilateral cooperation. By combining Korea's technological leadership in OTEC with Australia's track record in delivering large-scale energy projects, this partnership fosters shared value creation, joint research, development and commercialisation, and reflects a strategic interdependence that deepens the long-term partnership between the two nations.

In addition to advancing international cooperation, this partnership also supports Australia's national priorities by delivering 24/7 zero-emissions baseload power under the Powering Australia plan, enabling green hydrogen production in line with the National Hydrogen Strategy, and strengthening Australia's sovereign renewable energy capability – supporting both the Future Made in Australia agenda and the National Reconstruction Fund.

For the Republic of Korea, the partnership strengthens energy security by using Korean technology to produce renewable energy in Australia for future supply to Korea. It directly supports KRISO's mission to lead innovation in maritime technologies and aligns with the Ministry of Oceans and Fisheries' policy priorities – advancing the blue economy and enhancing Korea's global maritime leadership.

Details of the MOU

Signed on 5 December 2024, the *MOU for Scientific and Technological Cooperation* establishes a strategic partnership between Deep Sea Energy and the Korea Research Institute of Ships and Ocean Engineering (KRISO) to accelerate the research, development and commercial deployment of Ocean Thermal Energy Conversion (OTEC) technology.

The MOU outlines a shared commitment to develop the world's first commercial OTEC plant, combining KRISO's state-of-the-art OTEC technology with Deep Sea Energy's commercialisation and project delivery capabilities. It sets out a collaborative framework for knowledge exchange, joint project development, community outreach, industry engagement, and ongoing R&D. Initial efforts will focus on government and stakeholder engagement, site identification and feasibility studies, business use case development, and project origination and development.

The MOU brings together two core partners: **Deep Sea Energy**, an Australian renewable energy venture leading project development and commercial deployment of OTEC; and **KRISO**, Korea's leading ocean engineering research institute and developer of the K-OTEC 1000 system. This partnership is further supported by the **K-OTEC Alliance**, a consortium of supply chain partners supporting project delivery and infrastructure development.

Statements from the Partners

| Leo Cooper, Co-Founder of Deep Sea Energy, said: “As someone who has spent decades delivering major energy and infrastructure projects across Australia and the region, I am thrilled to see this partnership with KRISO come to fruition. The transition to clean, reliable baseload power is one of the defining challenges of our time, and OTEC represents a breakthrough opportunity for communities and industries seeking sustainable solutions. Deep Sea Energy’s mission is to bridge world-class innovation with real-world impact, and this collaboration draws on our team’s extensive experience in project delivery, technology commercialisation and stakeholder engagement. Together with KRISO, we are not only advancing the commercialisation of OTEC, but also building the foundation for a new era of renewable energy leadership. We look forward to working with partners and governments to realise the full potential of ocean energy for clean power, water and food security.”

| Dr Hyeon Ju Kim, Principal Researcher at the Seawater Energy Plant Research Center, KRISO, said: “OTEC, along with the cascade use of discharged seawater, can contribute meaningfully to sustainable development and the blue economy by ensuring a stable supply of essential resources such as renewable energy, clean water and food – particularly for coastal communities in Australia.”

About Ocean Thermal Energy Conversion (OTEC)

OTEC is an ocean-based renewable energy technology that generates electricity and clean water by harnessing the temperature differential between the ocean’s warm surface water and cold deep water. Unlike intermittent sources such as solar and wind, OTEC provides continuous 24/7 baseload power that is zero-carbon, not dependent on weather and cost-effective at scale.

OTEC offers significant benefits for industries and communities seeking clean, reliable and affordable energy. By producing both renewable power and clean water, it supports essential services, reduces fossil fuel dependence, and enables economic growth – powering advanced manufacturing and infrastructure such as AI data centres. With no direct emissions and minimal environmental footprint, OTEC contributes to a climate-resilient, and energy-secure future.

According to the International Renewable Energy Agency (IRENA), up to 44,000 TWh per year could be generated from ocean thermal globally – more than the current global electricity demand. With a vast exclusive economic zone, Australia is well positioned to lead in OTEC deployment. The technology has reached advanced readiness, with KRISO’s 1MW offshore system (K-OTEC 1000) is considered the world’s most advanced OTEC technology and has been successfully demonstrated at sea.

Invitation to Collaborate

Deep Sea Energy welcomes expressions of interest from potential partners and investors interested in project development and delivery for OTEC. The company also seeks to engage with governments and industries looking for renewable energy and clean water solutions. To learn more or explore partnership opportunities, contact Leo Cooper at leo.cooper@deepseaenergy.org.



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About the Partners

Deep Sea Energy is an Australian renewable energy venture focussed on the commercialisation and deployment of Ocean Thermal Energy Conversion technology. The company works with governments globally to deliver renewable energy and water solutions, leading project development across site origination, stakeholder engagement, feasibility studies, and supply chain management. Its projects are based on KRISO's technologies and platform designs, delivered in partnership with the K-OTEC Alliance. Based in Sydney, Deep Sea Energy was founded in 2024 by Leo Cooper, Brian Lim and Ivan Chua, who together bring over 50 years of experience in energy infrastructure, systems engineering and technology commercialisation – having managed and delivered projects valued at over \$10 billion.

The **Korea Research Institute of Ships and Ocean Engineering (KRISO)** is a government-funded research institute under Korea's Ministry of Oceans and Fisheries, specialising in maritime engineering and technologies. Established in 1973, KRISO has been at the forefront of innovation in areas such as ocean thermal energy conversion, offshore structures and autonomous vessels. Through its Seawater Energy Research Centre, led by Dr Hyeon Ju Kim, KRISO is advancing Ocean Thermal Energy Conversion and seawater utilisation technologies.