

CooGEN™

Revolutionizing Climate Solutions with Sustainable Cooling and Clean Energy

The urgency of addressing climate change has never been clearer. Rising temperatures are making our living environments increasingly unhealthy, and we need effective, innovative solutions to combat this challenge. CooGEN™ offers a groundbreaking, low-cost, and reliable technology that not only provides cooling for habitations but also delivers clean, sustainable energy, tackling decarbonization head-on.

Current energy conversion technologies require high temperatures—often in the hundreds of degrees Celsius—to generate useful power, leading to the waste of low-grade heat and exacerbating environmental issues. However, low-grade heat, which is abundant in our atmosphere, can be harvested for both power generation and cooling. CooGEN™ capitalizes on this overlooked resource.

Our patented machine offers a dual solution to the intertwined problems of energy production and cooling. It operates on a closed-loop hydraulic system utilizing high-pressure liquid CO₂ which is pumped to drive a generator. Cold liquid like LNG (Liquid Natural Gas) can be pumped to generate electricity and vaporise out as CNG (Compressed Natural Gas). As the liquid CO₂ or LNG is heated by an energy carrier fluid, it simultaneously cools the surrounding environment by discharging a chilled fluid. The cold CO₂ is generated on-site, ensuring efficiency by using returned liquid CO₂ at ambient temperature. For LNG, it vaporizes and discharges CNG for other application.



The energy carrier fluid effectively harvests heat from the atmosphere, providing a 100% renewable energy source for CooGEN™. Additionally, if needed, we can utilize waste heat from other processes, leveraging heat pump technology with a COP (Coefficient of Performance) of 3 to elevate the energy carrier fluid to at least 30°C. Importantly, our technology requires no burning of carbon-based fuels, ensuring a truly sustainable solution.

CooGEN™ can be tailored to meet specific cooling and power requirements. Its modular design allows for multiple smaller units to be cascaded together, enabling scalable output. This versatility makes it applicable for on-site delivery of cooling and clean power to any type of building, mobile vehicle (including trucks, buses, cars, ships, and airplanes), or industrial facility. Our solution empowers communities everywhere to access clean, sustainable energy with safety, security and independence.

Join us in revolutionizing how the world cools and powers itself while effectively addressing the urgent need for climate action.

Contact Info: Mr. TAN Lien Chiow, The Inventor, Founder and CEO of g-EN Pte Ltd

Email: TLC@g-EN-Corporation.com Tel and WhatsApp: +65 92961953 WeChat: TLC-2014