Sustainability Bulletin

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40% Lower Energy Use: Deep Sea Desalination Tests a New Model

Four miles off Southern California's coast, OceanWell is developing a novel approach to desalination that aims to dramatically cut energy use and emissions. Its proposed Water Farm 1 would place reverse-osmosis systems about 1,300 feet (400 metres) below the ocean surface, using natural water pressure to produce up to 60 million gallons (225 million litres) of freshwater per day.

By relying less on electricity-intensive pumping, the company says the system could reduce energy demand by around 40%, significantly lowering the carbon footprint of desalination. That matters as the sector currently emits an estimated 500–850 million tonnes of CO_2 annually, close to the emissions of global aviation. With more than 20,000 desalination plants worldwide and industry growth of roughly 7% a year since 2010, uptake of the technology is rising – particularly in the Middle East, where freshwater scarcity makes desalination unavoidable. However, the technology remains nascent, with only limited pilot deployments so far.

Green Debt Hits $947 Billion: Clean Power and Grid Upgrades Lead a Record Year

Global climate aligned financing is accelerating again, driven less by branding and more by infrastructure demand. Bloomberg Intelligence reports green bond and loan issuance hitting a record $947 billion in 2025, supported by investment in renewables, energy storage, and grid upgrades. These upgrades are increasingly essential as electrification expands and electricity use rises, including from data centers.

Asia Pacific stood out as a major growth engine. Issuers raised $261 billion in green debt, about 20% higher than the previous year, reflecting the scale of power and transport buildouts underway. The region's momentum highlights where large capital programs are already moving from planning to delivery. Markets send a clearer credibility signal, with investors rewarding well defined use of proceeds and stronger reporting. Finance grows fastest where projects are shovel ready, grid connected, and able to show measurable emissions impact within a few years.

Global Energy Transition Investment Hits Record $2.3 Trillion in 2025

Global investment in the energy transition reached a record $2.3 trillion in 2025, up around 8% year on year, according to BloombergNEF. Growth held despite trade and geopolitical pressures, led by electrified transport at about $893 billion. Investment also rose in grids and renewable power infrastructure, showing capital is shifting toward system integration and mobility. Asia Pacific, including China, contributed nearly half of global flows, but the pace still falls short of what climate pathways require.

40%

Novel desalination plants 1,300 feet below the ocean surface could cut energy use by around 40%

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