

ENERGY

Tech Review

WASTE TO
ENERGY
EDITION



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Turning the World's Waste Challenges into Energy Solutions

Each day, the world produces around 5.5 million tons of waste. Over a year, that adds up to more than two billion tons of solid municipal waste, much of which takes up space in landfills and produces carbon emissions as it rots away.

The increasing waste and the rising demand for cleaner energy are bringing attention to sustainable energy conversion solutions that can facilitate a circular economy. Organizations are implementing cost-effective approaches and finding economically viable ways to treat waste.

Co-Energy, an Israeli start-up company in the climate-tech sector, is helping clients cross the chasm of greenhouse emissions through solutions that convert waste into hydrogen, biochar, electricity, and fuel. The company takes a holistic approach to meet global challenges of waste treatment, de-carbonization, and zero waste goals by designing and establishing technological solutions for waste treatment.

"Our solution creates a sustainable circular economy around municipal and industrial waste, forming a resource out of a nuisance and turning consumers into producers," says Amir Cohen, chairman of Co-Energy.

Co-Energy's plants combine multi-technologies into a highly efficient and cost-effective process capable of transforming various waste types into energy. The plants operate continuously, which is significantly more efficient than a batch-wise process, saving energy along the way. It has a sophisticated control system with remote options for preserving process stability in the presence of non-homogeneous waste. The output energy can be stored and released on time per the advanced requirements for integrating renewable energies in the smart electricity grid.

Unlike most waste treatment facilities, Co-Energy's plant eliminates the need for pre-sorting and separation procedures. They are designed to be incorporated into a client's existing facility without allocating additional space and infrastructure. It runs on user-friendly software and can be operated remotely with just one or two men per shift to load the feedstock and ensure everything runs smoothly.

The cherry on top is its waste-to-biochar solutions. By converting organic waste to biochar, Co-Energy's plants provide the perfect solution for cattle and dairy farm owners who wish to treat animal manure in a profitable and environmentally friendly way.

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One of their clients, a recycling company in Israel, wanted to convert plastic waste to electricity. By installing Co-Energy's plant, the client could transform vast amounts of plastic waste at their disposal to produce electricity for self-consumption. The project's goal was to use a catalytic system to convert plastic waste into fuel, which will power up a genset that will generate 750KW at 400V while staying in compliance with rigorous environmental standards. As a result, the client became energy-independent by using their waste to generate electricity and operate the entire recycling facility. The client was able to maximize profitability and yield higher ROI as they no longer depended on subsidies or grants. Since there are no raw material costs involved, the client got a gate fee for the plastic they collect while also witnessing a reduction in electricity bills.

The move toward a circular economy requires rethinking the supply chains currently used for waste. Achieving energy and climate goals demands a dramatic scaling up of clean energy technologies. Co-Energy leaves no stone unturned by deploying its climate tech solutions that put harmful emissions on the right path.

Where others see waste, Co-Energy sees renewable energy resources. **ET**



Amir Cohen,
Chairman

CO-ENERGY



The annual listing of 10 companies that are at the forefront of providing Waste to Energy solutions and transforming businesses