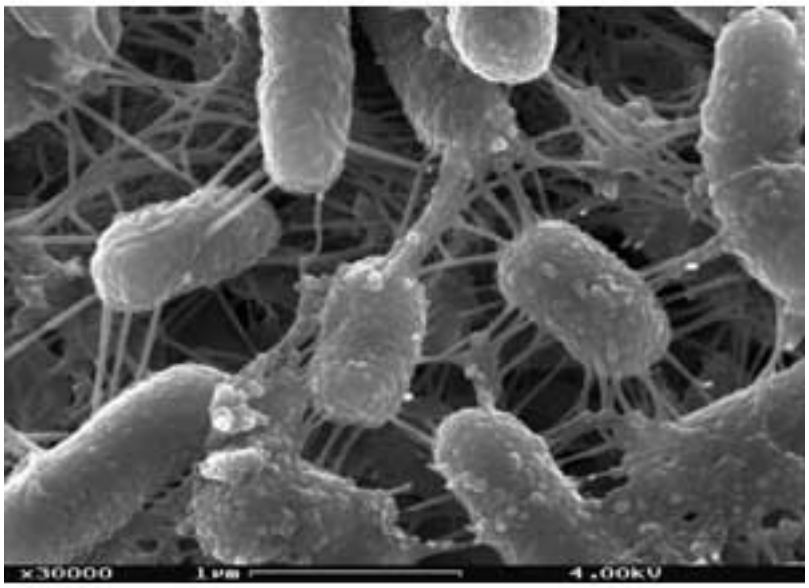
Wastewater to Electricity



Energy Technology Ventures, a GE, NRG Energy and ConocoPhillips joint venture, is making its first non-U.S. and first water-related investment by providing capital to Emefcy Ltd., an Israeli company that can turn wastewater treatment from an energy drain to an electricity generator.

Emefcy’s technology uses naturally occurring bacteria in an electrogenic bioreactor to treat wastewater. The organic material in the waste produces power and treated water, transforming wastewater treatment from an energy-intensive, cost-intensive and carbon-intensive process into an energy-generating and carbon-reducing process.

The benefits are both economic and environmental: Conventional wastewater treatment uses 2 percent of global power capacity (80,000 megawatts and 57,000,000 tons per year of carbon dioxide), costing $40 billion per year. Rather than using conventional energy-intensive aerobic processes or methane-producing anaerobic digestion to treat wastewater, Emefcy harvests renewable energy directly from the wastewater and feeds it to the power grid, enabling the energy-positive wastewater treatment plant. The primary initial applications are for wastewater treatment in the food, beverage, pharmaceutical and chemical industries, with a total market potential of $10 billion annually.

Energy Technology Ventures was joined in the funding round for Emefcy by Pond Venture Partners, Plan B Ventures and Israel Cleantech Ventures. Financial details

were not disclosed.

“We will use Energy Technology Ventures’ investment to continue development of our technology into full-scale commercial implementation by the end of this year for municipal and industrial wastewater treatment,” said Emefcy CEO Eytan Levy. “All told, wastewater treatment is a $100 billion industry, and our technology can significantly reduce the economic and environmental costs.”

One of the partners in Energy Technology Ventures, GE, is active in wastewater treatment and is expanding its technology focus on Israel, called the “Silicon Valley of water technology.”

Israel is an important center for innovation and scientific discovery. GE recently opened its newest multi-disciplinary Research and Development Center in Haifa. A dozen researchers will be hired to evaluate and work on clean energy, water and healthcare technology projects. The new Israel Technology Center will facilitate the introduction of advanced technologies to GE through partnerships with local technology companies and academia.

The GE investment was made through business unit GE Energy Financial Services, which has made one other investment in an Israeli technology company -- SolarEdge, a provider of smart, holistic solar photovoltaic power harvesting and monitoring solutions for maximum energy and cost efficiency. SolarEdge is based in Hod Hasharon**,** Israel.

For more information, please visit www.emefcy.com *[1],* www.energytechnologyventures.com *[2],* www.geenergyfinancialservices.com *[3] and* www.ge.com *[4].*

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