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Dais Analytic receives ARPA-E grant from DOE

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A division of the **U.S. Department of Energy** awarded a $700,000 grant to **Dais Analytic Corp.**, a nanotechnology company in Odessa.

The money is designed to help the Dias Analytic develop its water-based heating, cooling and refrigeration product, NanoAir, and bring it forward for full commercial use.

In warm and humid climates, the need to remove moisture out of the air significantly reduces the efficiency of air conditioning, the DOE wrote in an announcement.

Dais will scale in size and field trial a novel dehumidification system, the DOE wrote in a Sept. 10 description of the award. The system operates by directly manipulating water vapor using a selectively permeable membrane.

“The membrane, made of a nano-structured solid polymer, is permeable to moisture but not permeable to air, the report said. “The system creates a vacuum behind the membrane that pulls water vapor from air without changing its temperature. The vapor is expirated to the environment through a second set of membranes external to the controlled environment.”

The grant is from the DOE’s Advanced Research Project Agency – Energy and is one of six grants totaling $9.6 million. It was the only one in Florida. Three of the grant recipients were based in California.

Dais (OTC BB: DLYT) is working to commercialize its nanotechnology inventions. The company’s other applications include desalination, energy efficient equipment and energy storage.

The worldwide heating, ventilating and air-conditioning, and refrigeration market is worth $287 billion, the release said.

“The system promises significantly reduced energy consumption for air cooling in warm and humid climates and reduced future CO2 emission growth from the HVAC sector,” the DOE wrote in its summary.

NanoAir reduces energy use and reduces CO_2 emissions by more than half while eliminating the use of refrigerant fluids such as CFCs and HCFCs.

“With current heating, cooling and refrigeration technologies consuming approximately 18 percent of all energy produced worldwide, NanoAir has the power to be improve the world’s ecology and the environment,” said Tim Tangredi, president of Dais, in a statement.

The ARPA-E grant immediately funds several new jobs in Tampa Bay at Dais, a new release said, but it was not more specific.