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BETO Announces Awards to 13 Small Businesses to Develop Innovative Biobased Products and Biomass Processing Technologies

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The U.S. Department of Energy's (DOE) Bioenergy Technologies Office (BETO) announced on July 18, 2024, that it selected 13 small businesses to develop innovative biobased products and biomass processing technologies. The companies, located across ten states, have been selected to receive up to $206,500 each for this Phase I Small Business Innovative Research (SBIR) award. According to BETO, of the 13 awards, six are first-time awardees, four are located in Historically Underutilized Business (HUB) zones, two are in socially and economically disadvantaged areas, and one is a woman-owned business. The awards under the two BETO topics include:

- Sustainable Biomass Conversion to Biobased Materials — BETO states that regulations are emerging in the United States and worldwide that necessitate sustainable replacements to commonly used materials such as foam, adhesives, resins, and others. BETO supports efforts to decarbonize the industrial sector to produce cost-effective and sustainable chemicals, materials, and processes utilizing biomass and waste resources. This topic is focused on converting sustainable biomass and waste feedstocks to biobased materials.

    - Altex Technologies Corporation (San Jose, California): Battery-Grade Graphite Production from Biomass;

    - Capro-X, Inc. (Ithaca, New York): Cellulose Ester Bioplastics from Organic Waste-Based Fatty Acids;

    - Dynaflow, Inc. (Jessup, Maryland): Production and Extraction of High-Value Wax Esters and Lipids from Yarrowia Lipolytica Using Cavitation Enhanced Hot Water Extraction;

- Exelus, Inc. (Fairfield, New Jersey): Low-Cost Route to Glycols from Lignocellulosic Biomass;
- Global Algae Innovations, Inc. (San Diego, California): Aqueous Algae Oil Extraction;
- Good Fibes Inc. (Chicago, Illinois): Additive Manufacturing of Recombinant Elastic Proteins for Sustainable Non-Woven Textiles;
- New Iridium (Boulder, Colorado): Development of Novel Light-Activated Process for Bio-Acetic Acid Production; and
- Physical Sciences, Inc. (Andover, Massachusetts): Sustainable Biopolymer Alternatives for Fossil-Fuel Derived Foams.

- Alternative Uses of Commercial Equipment (ACE) — BETO states that as part of the government's comprehensive strategy to decarbonize all modes of transportation, it is primarily focused on research, development, and deployment to produce "drop-in" biofuels from renewable biomass and waste resources that are compatible with existing fueling infrastructure and difficult-to-electrify modes of transportation, including aviation, maritime, rail, and medium-to-heavy-duty off-road vehicles. According to BETO, rather than developing new equipment, the intent of this topic is to test commercially available equipment, with minor or major modifications, to demonstrate preprocessing of biomass and waste feedstocks.
    - Atlantic Biomass Conversions, Inc. (Frederick, Maryland): Low-Cost Production of Sustainable Aviation Fuels (SAF) from Perennial Feedstocks Using Simultaneous Ball Milling and Enzyme Hydrolysis;
    - Enexor BioEnergy, LLC (Franklin, Tennessee): Modular Biomass Preprocessing System Development;
    - Forest Concepts, LLC (Auburn, Washington): Particle-Level Densification of Bulk Biomass Materials to Replace Pelletized Fuels and Feedstocks;
    - Novastus (Cookeville, Tennessee): Driving Decarbonization — Producing [Refuse-Derived Fuel (RDF)] from Waste Feedstocks Using Commercial Equipment; and
    - WeNeW Carbology, LLC (Charlottesville, Virginia): Combine and Blower Equipment Adaptation for Biomass Preprocessing

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