U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Algae Fuel Research and Development Facility B-Roll

Scene-by-Scene Description

Get the facts behind the footage available on the U.S. Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy (EERE) B-Roll website at **eere.energy.gov/news/b_roll.cfm**.

Video Title: Algae Fuel Research and Development Facility
Video Only/No Audio
Location: Saphhire Energy, Las Cruces, New Mexico
Shoot Dates: April 12, 2010
Total Running Time: 7:27

Scene 1: 00:05: Establishing shots of the algae fuel research and development facility. Algae can be cultivated in large open ponds or in closed photobioreactors located on non-arable land in a variety of climates (including deserts).

Scene 2: 00:50: Large-scale open pond growing algae. Microalgae, as distinct from seaweed or macroalgae, can potentially produce 100 times more oil per acre than soybeans—or any other terrestrial oil-producing crop.

Scene 3: 01:44: Mid-scale open pond growing algae.

Scene 4: 03:19: Smaller-scale open pond growing algae.

Scene 5: 04:23: Mini-pond outdoor testing area.

Scene 6: 05:38: Production distribution unit (PDU) for processing fuel from algae.

Scene 7: 06:39: Algae fuel research laboratory.

Learn More about Algal Biofuels

Biofuels made from microalgae hold the potential to solve many of the sustainability challenges facing other biofuels today. Microalgae are single-cell, photosynthetic organisms known for their rapid growth and high energy content. Some algal strains are capable of doubling their mass several times per day. In some cases, more than half of that mass consists of lipids or triacylglycerides—the same material found in vegetable oils. These bio-oils can be used to produce such advanced biofuels as biodiesel, green diesel, green gasoline, and green jet fuel.

More information about biomass technologies can be found at the EERE Biomass Program website at **biomass.energy.gov**.