

Life Cycle Assessment of Algae-based Biofuels

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Project Objectives:

Develop a process-based lifecycle assessment (LCA) of biofuel production from algae using empirical data from the industry, emissions measurements from combustion testing, air quality predictions from a computational chemical transport model, and regional processing and distribution market expertise.

Evaluate the feasibility of heterotrophic growth at the pilot scale by recycling nutrient waste streams such as expired carbonated drinks, surplus glucose from candy production, and compost leachate.

Engage a group of high school students from Londonderry, New Hampshire, the Inventioners, in research on algae harvesting for biofuel.