



# ESW BIOFUELS

# Newsletter Fall 2017



Engineers for a Sustainable World



Develop Promote Innovate Cooperate

# Table of Contents



## **ESW Biofuels**

New Leaders

New Members



## **Research & Development**

Heat Transfer Project



## **Bioenergy Implementation**

Bio-CNG Feasibility Study



## **Business & Outreach**

Wind, Hydro Demonstrations

FOG Collection Station





# ESW Biofuels

## New Leadership

This semester, Biofuels has brand new leadership! Jared Hibshman is the Team Lead, Joanna Davis is Business & Outreach Sub-team Lead, Connie Li is Bioenergy Implementation Sub-team Lead, and Michael Xiao is Research & Development Sub-team Lead.

## New Members

After a very successful recruitment, Biofuels welcomed six new members to the team! Kyle Nichols, a junior in Environmental Engineering, Hannah Doyle, a freshman in Engineering Physics, and Amanda Amornwichee, a freshman in Materials Science, all joined the Business & Outreach sub-team. Manisha Kunala, a sophomore in Chemical Engineering, and Gregory Brumberg, a freshman double majoring in Chinese and Chemistry, joined the Bioenergy Implementation sub-team. Sai Mallipedhi, a freshman in Chemical Engineering, will be working on Research & Development.





# Research & Development

## Heat Transfer Project

The Research & Development sub-team is continuing to make progress on the Heat Transfer Project. They have created models to compare a heat pump and heat exchanger, gathered and analyzed data for the heat exchanger, finished a written report, and are currently consulting professors to help with data collection from their ASPEN heat pump model. The team is also planning to create a biodiesel reactor to convert waste vegetable oil into biodiesel.







# Bioenergy Implementation

## Bio-CNG Feasibility Study

Having completed two feasibility studies last semester, the Bioenergy Implementation sub-team is now looking for a new feasibility study to conduct with the IAWWTF this semester. The team is also working on starting an annual biofuels-based competition. They are currently building a network of SUNY and Ivy League schools to take part in the competition, finding a company to sponsor it, and brainstorming challenge ideas.





# Business & Outreach

## Wind, Hydro Demonstrations

Last semester, the Business & Outreach sub-team worked with Research & Development to create hydropower and wind demonstrations to supplement their presentations at the Sciencenter and local elementary schools. These were a big hit with audiences!



## FOG Collection Station

They also discovered that the FOG Collection station at Tompkins County Recycling and Materials Management had closed during the winter due to FOG crystallization. The team worked to find solutions to prevent FOG from freezing this coming winter.

