

## *Bioenergy Technologies Office*

# 2017 Program Management Review

*Advanced Algal Systems Response*

**Alison Goss Eng**

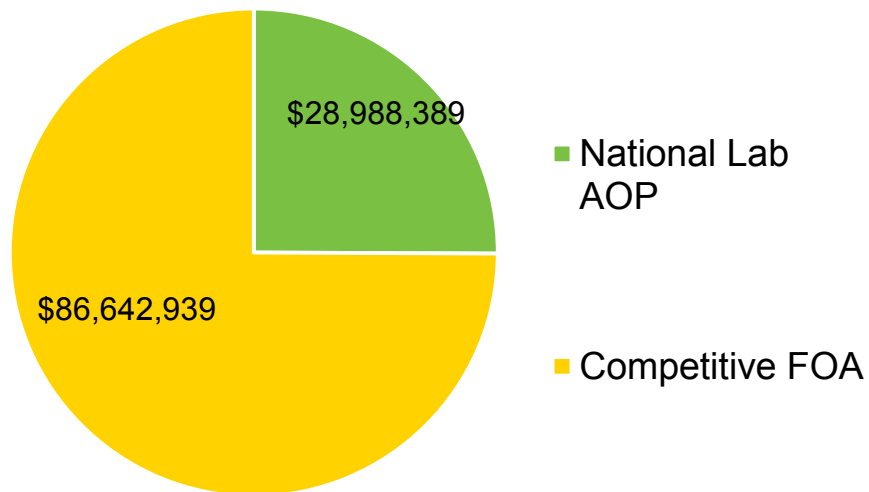
**Program Manager**

**Arlington, Virginia**

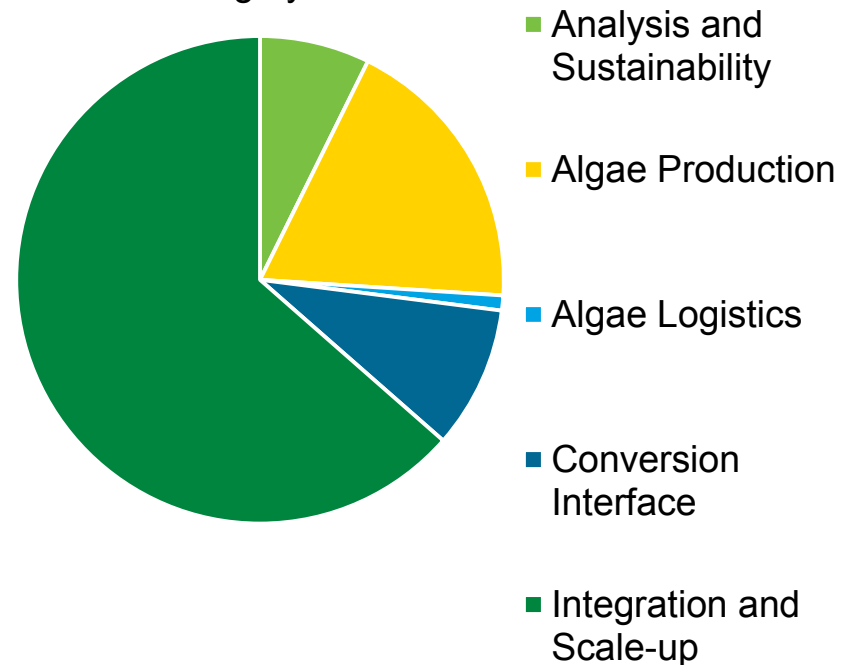
**July 13, 2017**

- Total of **39** Projects Reviewed
- Total of **\$115,631,328** in Funding Reviewed
- Advanced Algal Systems represents **16%** of Total BETO Portfolio

Funding Type



Funding by WBS



- Thank you to our high achieving performers identified by the panel:
  - **Global Algae Innovations** – achieved commercialization of their Zobi harvesting/dewatering system and progress in productivity.
  - **Algae Testbed Public-Private Partnership (ATP3)** – delivers high-quality, long-term growth data; method development and standardization; and data support to other projects in the portfolio.
  - **Algae Technology Educational Consortium** – fills an important role for the industry by establishing degree programs and coursework to deliver a trained workforce.

*Improving the yield of algal biomass and useful compounds therein should continue to be of highest priority.*

## **Response:**

- Biomass productivity and biofuel yield have been key targets in the past four FOAs: ABY 1 and 2, TABB, and PEAK
- Future work will continue to keep productivity as our highest priority, focused on biological improvements tested in outdoor-relevant conditions

*Better ties between laboratory researchers and industrial interests are needed.*

## **Response:**

- The program will continue to leverage the industry boards of ATP3 and other competitive projects, as well as input from stakeholders at workshops and through the Algae Biomass Organization industry group
- Going forward, the program will be sure to critically evaluate and improve upon the Tech-to-Market plans of the national laboratories, and support partnerships between industry and fundamental R&D

*Agronomic approaches to crop improvement and integrated pest management are needed*

## **Response:**

- Per the program's Algae Farm design case, we concur that algal cultivation should be envisioned as an agricultural practice rather than biotechnology
- Long-term outdoor field testing at meaningful scales is planned per our MYPP, within a five year timeframe
- BETO will continue to coordinate with USDA and EPA through the Biomass R&D Board on issues such as GMO deployment

We appreciate your statements affirming that BETO funding has enabled **research productivity, innovative approaches, significant advances** along state of technology, and excellent **synergies** among projects, with **no notable gaps** – though we acknowledge:

- There is relatively little work on harvesting/dewatering outside of competitive portfolio due to focus on increasing biomass productivity
- We are leaving co-product strategies to individual companies, while assisting with analysis via NREL
- We are coordinating regulatory issues with EPA, though not a mission of our program

- Thank you to **Eric Jarvis** and the entire Algae Review panel for their time, engagement, and constructive review of the portfolio.
- Thank you for recognizing our efforts to address the 2015 Peer Review findings, and we are eager to incorporate the recommendations from this 2017 review.
- And a special thanks to our Algae Session Lead **Daniel Fishman**, Technology Manager!