



**ALGAE INTERAGENCY WORKING GROUP
(IWG)
UPDATE TO THE
TECHNICAL ADVISORY COMMITTEE (TAC)**

March 5, 2015

Overview of the Algae Working Group

- *What is your charter/mission?*
 - The Biomass R&D Board Interagency Algae Working Group leverages federal resources across the breadth of the biomass supply chain to bring together experts from federal agencies with interests and authorities related to algae from the perspectives of energy, agriculture, human and animal health, and the environment.
 - The Algae Working Group is advising, communicating, and coordinating federal research, development, demonstration, and deployment activities relating to the production and use of algae and their products/co-products in a sustainable manner within an appropriate regulatory framework. This Working Group also serves as means to exchange ideas and discuss issues that transcend federal activities related to the impact of algae and any algal derived products/co-products on commerce, health and the environment.
- *Who are your members?*
 - **Current Agency Representation**
 - DOE:** Bioenergy Technologies Office (BETO) ; Basic Energy Sciences (BES); ARPAe
 - DOD:** USAF; DARPA; ARO
 - EPA:** Office of Pollution Prevention and Toxics (OPPT); Office of Water (OW); Office of Research and Development (ORD)
 - FDA:** Center for Veterinary Medicine (CVM); Center for Food Safety and Applied Nutrition (CFSAN)
 - NOAA:** Office of Aquaculture; Coastal Ocean Program in the Center for Sponsored Coastal Ocean Research (CSCOR)
 - NSF:** Chemical, Bioengineering, Environmental, and Transport Systems (CBET)
 - USDA:** Rural Development (RD); National Institute of Food and Agriculture (NIFA); Office of the Chief Economist(OCE); Animal and Plant Health Inspection Service (APHIS)
- *What are some of your projects/past accomplishments?*
 - Initial trials of an algae information resource through use of the Knowledge Development Framework of the DOE.
 - Contributions to the development of the Bioeconomy Federal Strategy Vision

Current AWG Activities

What are you working on?

The AWG meets periodically to enable and facilitate in-depth discussions of the following topics as they relate to research and development challenges, federal investments, and associated statutes and regulations governing technology demonstration through commercialization.

Sustainability ; Feedstock Production and Logistics ; Conversion ; Analyses ; Systems Integration ; Other topics as considered timely and relevant .

Meeting times are also used to discuss significant policies, regulations, events, and other agency developments of mutual interest.

Currently we are focused on supporting the development of the Bioeconomy Federal Strategy as authorized by the Biomass Board. The Algae Working Group has assisted in the development an interagency white paper describing a vision for an Enhanced Bioeconomy. It provided members for participation in the Bioeconomy Federal Strategy Workshop. Understanding potential challenges to full realization of potential for algae-based fuels, products, and energy to contribute to the strategy is essential. From the algae session of the Bioeconomy Workshop, a follow-on workshop on the state of the science and the regulatory climate for algae is envisioned.

We plan to provide expertise and assistance in development of an OECD consensus document on risk assessment procedures for genetically engineered commercial microalgae

Focus areas for 2015

- *What are some areas that would be helpful for the TAC to focus on in 2015?*
 - Consideration of the import of the observation that productivity levels must greatly improve if algae are to be a significant component of the Bioeconomy. Much progress has been made recently, as evidenced by the NAABB report of 2014 but much more is needed.
 - Strain improvements
 - Process improvements
 - Understanding the biology and ecology of target species for commercialization, not just the physiology. To be used sustainably, species need to be chosen that are efficient users of nutrients, do not put unnecessary stress on resources (e.g. fresh water) and do not threaten native ecosystems if they escape from containment.
 - Look more at the potential for macroalgae. The issues, dimensions of sustainability, and limiting constraints are different than for microalgae.