



**Biomass R&D Technical
Advisory Committee (TAC)
March 8, 2016**

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Biomass R&D TAC Designated
Federal Officer (DFO)**

TAC 2016 Business

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Purpose of TAC (1 of 2) – BRDI Components

- To advise the Secretaries of Energy and Agriculture with respect to the Biomass R&D Initiative.
- To evaluate and make recommendations in writing to the Board to ensure the following:
 - A. Funds authorized for the Initiative are distributed and used in a manner that is consistent with the objectives, purposes, and considerations of the Initiative;
 - B. Solicitations are open and competitive with awards made annually and that objectives and evaluation criteria of the solicitations are clearly stated and minimally prescriptive, with no areas of special interest;
 - C. The Points of Contact are funding proposals under this title that are selected on the basis of merit, as determined by an independent panel of scientific and technical peers predominantly from outside the Department of Agriculture and Energy; and
 - D. Activities under this title are carried out in accordance with this title.
- The Committee Charter specifically calls for TAC to make recommendations related to the BRD Initiative.

Purpose of TAC (2 of 2) – Rest of the Responsibilities

- DOE and USDA General Counsel have advised that a broader biomass R&D scope is permissible.
- TAC recommendations should be written to address the findings and needs of the Committee in the following areas:
 - Specific Committee Reporting Obligations- BRDI
 - Requests from the Board
 - Technical Biomass R&D Recommendations
- Recommendations are used to inform the Biomass R&D Board and provided to DOE and USDA Programs.
- A report of recommendations consented to frame the TAC Annual Report.
- Each recommendation is commented upon by both DOE and USDA.

TAC Subcommittees

- ❑ Conversion
- ❑ Sustainable Feedstocks, Production and Logistics
- ❑ Products Markets, and Systems

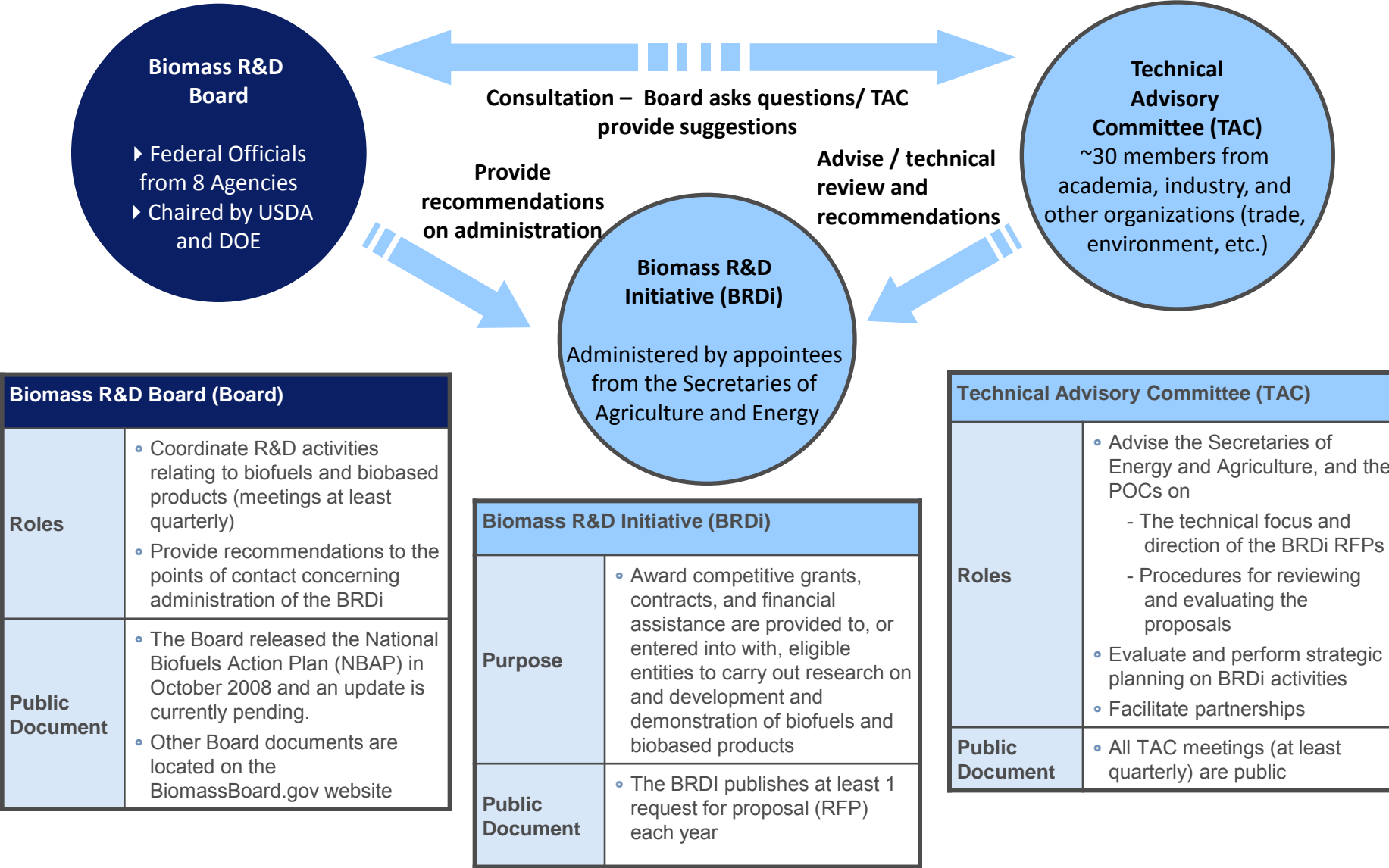
Subcommittees develop:

- Problem Statements: Identify issues/challenges that must be addressed.
- Recommendations: Technical or R&D strategies that address the identified problem statements.
- Information Requests: Requests for speakers, data, reports, or other information that can be given or presented to the committee that assists them in developing their recommendations.

Subcommittees gain wisdom through:

- Assembly of subject matter experts to address cross-cutting challenges.
- Development of workshops and reports based on recommendations.
- Site visits to key resources.
- Sharing of member expertise.

Biomass R&D Breakdown



Biomass Board - Federal Composition

- **The Board is a panel consisting of senior-level representatives from these agencies:**

- U.S. Department of Agriculture: Co-Chair
- Department of Energy: Co-Chair
- National Science Foundation
- Environmental Protection Agency
- Department of Interior
- Office of Science and Technology Policy
- Office of the Federal Environmental Executive
- Department of Transportation
- Department of Defense

- **Board Co-Chairs**

- Dave Danielson, Assistant Secretary for EERE, DOE
- Cathie Woteki, Under Secretary for REE, USDA



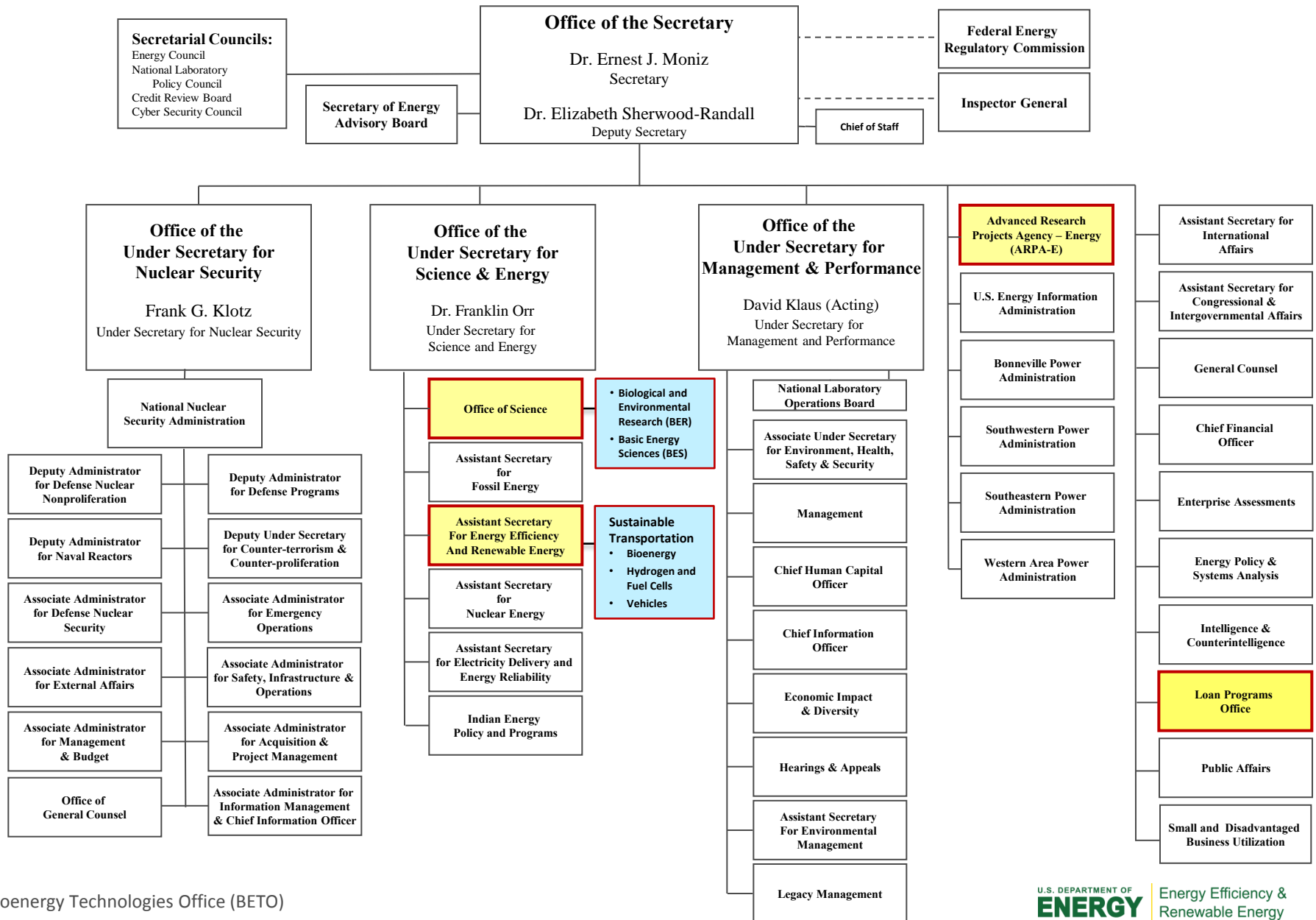
Co-chair



Co-chair



DOE Program Offices with Biomass Related Activities



TAC 2016 Work Timeline

Date	Committee Objectives
Q1 2016 March 8-9, 2015	<ul style="list-style-type: none">• View presentations on the interactions with the Biomass Board and hear the priorities, budgets and new initiatives of key Federal Biomass participants. Identify key information that TAC would like brought to upcoming meetings.
Q2 2016 Week of June 06	<ul style="list-style-type: none">• TAC along with the attending Operation Committees and Interagency Working Group guests begin to list and rank topics for TAC to consider.(TBD)• Agree on TAC 2016 topic areas.• Adjust the TAC sub-committee structures (if necessary) to best address one or more topics per future meeting.
Q3 2016 Week of August 15	<ul style="list-style-type: none">• Work in Subcommittees to develop recommendations on agreed upon topic areas. Field trip possibility.
Q4 2016 Week of November 14 th	<ul style="list-style-type: none">• Finalize and vote on 2016 recommendations.

Travel Process

- Natalie Roberts is the point of contact for all questions related to TAC travel and reimbursement. She can be reached at: natalie.roberts@ee.doe.gov or 202-586-2325.

Future Meeting Dates

- Tentative date for Q2 meeting have been identified below and will be confirmed during the meeting:
 - Q2: June 06, 2016

Agenda at a Glance (1/3)

Day 1: Technical Advisory Committee Meeting

March 8, 2016

8:30 a.m. – 8:45 a.m.	<u>Welcome</u> <i>Committee Co-Chair(s)</i>
8:45 a.m. – 9:10 a.m.	<u>Presentation:</u> Committee Business for 2015 and U.S. DOE Updates <i>Elliott Levine, DFO, U.S. Department of Energy</i>
9:10 a.m. – 9:30 a.m.	<u>Presentation:</u> USDA Update on Biomass R&D Activities <i>Todd Campbell, U.S. Department of Agriculture</i>
9:30 a.m. – 9:45 a.m.	<u>Presentation:</u> Biomass Research and Development Initiative (BRDI) Solicitation, Status, and Update <i>Daniel Cassidy, National Institute of Food and Agriculture, U.S. Department of Agriculture</i>
10:00 a.m. – 10:15 a.m.	Break
10:15 a.m. – 11:00 a.m.	<u>Presentation:</u> Overview of DOE Bioenergy Technologies Office 2016 and 2017 Budget, New Areas, and Activities <i>Jonathan Male, Director, Bioenergy Technologies Office, U.S. Department of Energy</i>
11:00 a.m. – 11:45 a.m.	<u>Presentation:</u> EERE Strategic Plan and High Priorities <i>Rueben Sarkar, Deputy Assistant Secretary for Transportation, Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy</i>
11:45 a.m. – 12:00 p.m.	<u>Public Comment</u>

Agenda (2/3)

12:00 p.m. – 12:45 pm	<u>Lunch</u> : Sustainability in Bioenergy – A Nation Connected (Video)
12:45 p.m. – 1:15 p.m.	<u>Presentation</u> : Overview of 2016 Budget, New Areas, and Activities for USDA NIFA and ARS <i>Dr. Sonny Ramaswamy, Director, National Institute of Food and Agriculture, U.S. Department of Agriculture</i>
1:15 p.m. – 1:45 p.m.	<u>Presentation</u> : Bioenergy and Bioproduct Development in Agriculture Research Service <i>Dr. Gene Lester, National Program Leader - Quality & Utilization of Agricultural Products / Biorefining & Biofuels Environmental, and Transport Systems, National Science Foundation</i>
2:30 p.m. – 3:00 p.m.	<u>Presentation</u> : ARPA-E and Biomass R&D <i>Dr. Krishna Doraiswamy, Technology-to-Market Advisor, Transportation Energy Resources from Renewable Agriculture, ARPA-E</i>
3:00 p.m. – 3:45 p.m.	<u>Presentation</u> : Federal Activities Report on the Bioeconomy <i>Harry Baumes, Director, Energy Policy and New Uses, Office of the Chief Economist, U.S. Department of Agriculture</i>
3:45 p.m. – 4:00 p.m.	Break
4:00 p.m. – 4:30 p.m.	<u>Presentation</u> : DOE Loan Programs Office and the Bioeconomy <i>Mike Reed, Director, Technical and Project Management Division, Loan Programs Office, Department of Energy</i>
4:30 p.m. – 5:30 p.m.	<u>Discussion</u> : Committee 2016 Instructions/Work Plan
5:30 p.m.	<u>Close Meeting</u>

Agenda (3/3)

3:45 p.m. – 4:00 p.m.	Break
4:00 p.m. – 4:30 p.m.	<u>Presentation:</u> DOE Loan Programs Office and the Bioeconomy <i>Mike Reed, Director, Technical and Project Management Division, Loan Programs Office, Department of Energy</i>
4:30 p.m. – 5:30 p.m.	<u>Discussion:</u> Committee 2016 Instructions/Work Plan
5:30 p.m.	<u>Close Meeting</u>

Day 2: Technical Advisory Committee Meeting

March 9, 2016

8:30 a.m. – 8:45 a.m.	<u>Welcome</u> <i>Committee Co-Chair(s)</i>
8:45 a.m. – 11:00 a.m.	<u>Breakout Session:</u> Subcommittee Breakouts
11:00 a.m. – 11:45 a.m.	<u>Presentation:</u> Subcommittee Breakout Reports
11:45 a.m. – 12:00 p.m.	<u>Public Comment</u>
12:00 p.m. – 1:00 pm	<i>Lunch</i>
1:00 p.m.	<u>Meeting Adjourn</u>

BETO Announcements and Updates



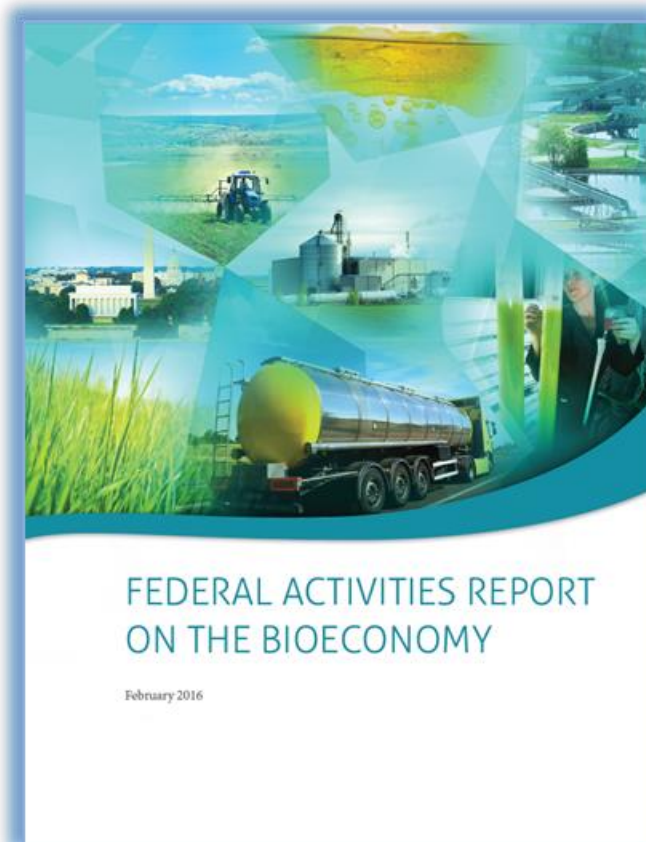
Preview of BETO Director updates

- **Funding Opportunity Announcements**
- **Requests for Information**
- **Upcoming Events**
- **Billion Ton Update**
- **BETO Strategic Plan**
- **Budget Highlights**

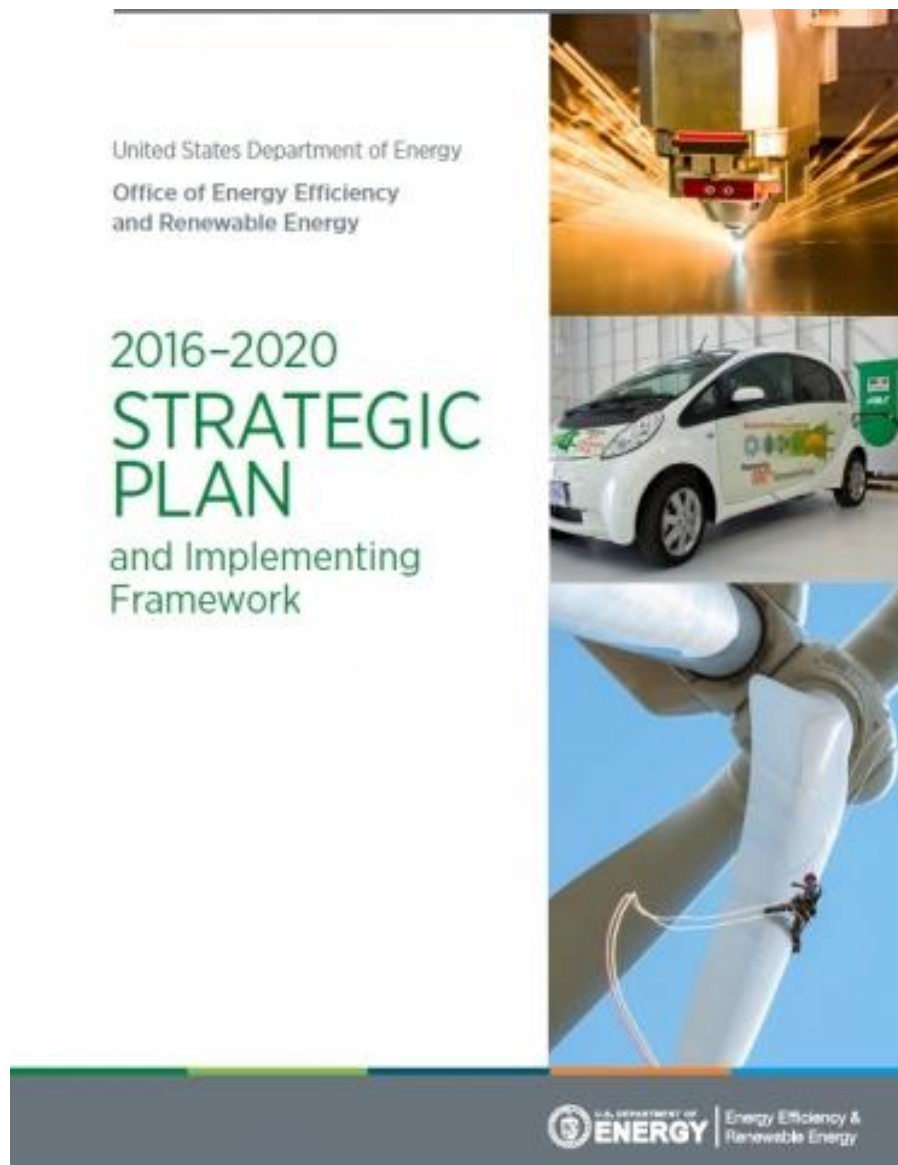


Federal Activities Report on the Bioeconomy

- On February 18th, the Biomass R&D Board released the [Federal Activities Report on the Bioeconomy](#) (FARB).
- This report aims to educate the public on the wide-ranging, federally funded activities that are helping to bolster the bioeconomy.
- The FARB details a vision for a Billion Ton Bioeconomy—tripling the size of today's bioeconomy by 2030.
- Achieving this vision would provide economic, environmental, and social benefits, including a considerable reduction in GHG emissions.



EERE Strategic Plan



Strategic goal sections aligned along EERE's core technology sectors and crosscutting areas

- Sustainable Transportation
 - Cost Reduction and Performance Improvement
 - Develop Technologies That Enable the Cost-Effective Production of Electric-Drive Vehicles Technology Validation and Risk Reduction
 - Support Pilot and Demonstration Facilities for Alternative Fuel Production Reducing Market Barriers
 - Support Pioneering Deployments of Market-Ready Vehicles and Alternative Fuels in Key Early Markets

Upcoming BETO Events (1/2)

Aviation Workshop

- May 24-25, 2016
Atlanta, Georgia



Biorefinery Optimization Workshop

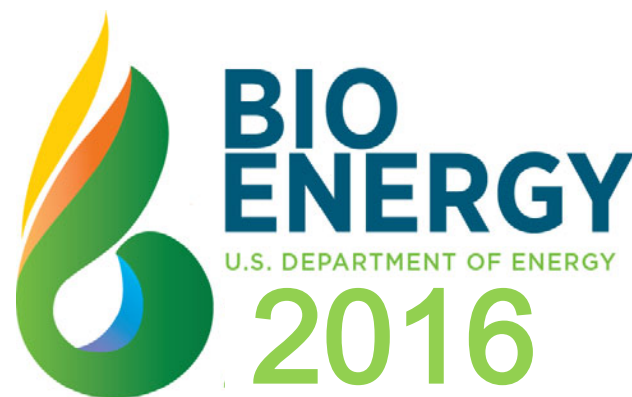
- May 2-3, 2016
Chicago, IL



Upcoming BETO Events (2/2)

Bioenergy 2016

- July 12-13, 2016
Washington Convention Center
Washington, DC



Bioenergy and Reducing Gulf Hypoxia

- Fall 2016
Location TBD



Bioenergy Knowledge Discovery Framework (KDF)

What is the Bioenergy KDF?

- It's an information-sharing network, an online collaboration toolkit, and a data resource that facilitates informed decision making. The KDF provides a full range of stakeholders with a means to access, contribute, synthesize, analyze, and visualize vast amounts of bioenergy information in a spatially integrated manner.



CONTRIBUTE DATA



FIND DATA



VISUALIZE DATA



FIND TOOLS & APPS

Publications

BETO Multi-Year Program Plan (MYPP)

- Updated version of the BETO's Multi-Year Program Plan was released in March 2015.
 - http://energy.gov/sites/prod/files/2015/04/f22/mypp_beto_march2015.pdf
 - New version is scheduled for release in March 2016.
 - A new version of the Update to the Billion-Ton Study is under-development.

Advanced Feedstock Supply System Validation Workshop Report

- Workshop held February 3 and 4, 2015 in Golden, Colorado
- Report Released 12/31/2015
- https://www.bioenergykdf.net/system/files/1/15-50315-R3_Summary_Report_Only_ONLINE.PDF

Office of Science - Recent Biofuels Related Activities

Office of Basic Energy Sciences (BES) Chemical Sciences, Geosciences and Biosciences Division



Basic Energy Sciences Annual Open Funding Opportunity Announcements

<http://science.energy.gov/bes/funding-opportunities/>

For information on all projects that are funded in BES:

Basic Energy Sciences Summary Report and FY 2014 Research Summaries.

<http://science.energy.gov/bes/research/>

For information on the biosciences-focused programs in BES,
Photosynthetic Systems and Physical Biosciences:

<http://science.energy.gov/bes/csgeb/research-areas/photosynthetic-systems/>

<http://science.energy.gov/bes/csgeb/research-areas/physical-biosciences/>

The Work of the Biomass R&D TAC can be Found Online



<http://www.biomassboard.gov/>

<http://www.biomassboard.gov/committee/committee.html>

- Find info on:
 - Previous work and recommendations;
 - Meeting summaries;
 - TAC membership list; and
 - Key “library” documents and referenced materials.

References and Useful Links

References:

1. Bioenergy Technologies Office Multi-Year Program Plan http://www.energy.gov/sites/prod/files/2015/04/f22/mypp_beto_march2015.pdf
2. Bioenergy KDF <https://www.bioenergykdf.net/>
3. Biofuels and Bioproducts Verification RFI: <http://energy.gov/eere/bioenergy/articles/energy-department-requests-information-biofuels-bioproducts-process-pilot>
4. Bioenergy KDF YouTube <http://www.youtube.com/user/BioenergyKDFChannel>
5. Biomass R&D Board <http://www.biomassboard.gov/>
6. Board Resources Library http://www.biomassboard.gov/committee/tac_library.html
7. Committee Resources Library <http://www.biomassboard.gov/committee/committee.html>
8. Scientific Research Access News Release <http://www.energy.gov/articles/us-department-energy-increases-access-results-doe-funded-scientific-research>
9. I-75 Clean Fuels Corridor <http://www.cleanfuelscorridor.com>
10. Research for Sustainable Bioenergy Workshop Report <http://genomicscience.energy.gov/sustainability/>
11. Water Environment Federation <http://www.wef.org/WaterEnergy/>
12. Bioenergy Technologies Office Annual Report 2014 http://energy.gov/sites/prod/files/2015/07/f24/beto_2014_annual_report.pdf
13. Federal Activity Report on the Bioeconomy: http://www.biomassboard.gov/pdfs/farb_2_18_16.pdf
14. Incubator II NOI <https://eere-exchange.energy.gov/#Foaldbc2c8dc8-5e7d-466b-a21b-b6b438b4ca6e>
15. BER Whitepaper: <http://genomicscience.energy.gov/biofuels/BER-Bioenergy-WhitePaper-Final.pdf>
16. BER Genomics FOA: http://science.energy.gov/~media/grants/pdf/foas/2016/SC_FOA_0001444.pdf

Useful Links:

1. BETO Web page <http://www.energy.gov/eere/bioenergy/bioenergy-technologies-office>
2. BETO News and Announcements <http://www.energy.gov/eere/bioenergy/listings/bioenergy-news>
3. MEGA-BIO FOA: <http://energy.gov/eere/bioenergy/articles/energy-department-announces-113-million-available-mega-bio-bioproducts>
4. Waste-to-Energy Workshop Notes <http://www.energy.gov/eere/bioenergy/waste-energy-roadmapping-workshop>
5. Peer Review 2015 <http://www.energy.gov/eere/bioenergy/2015-project-peer-review>
6. DOE/EERE, Sustainable Transportation Office <http://www.energy.gov/eere/transportation>
7. ABY2 FOA: <http://energy.gov/eere/bioenergy/articles/energy-department-announces-15-million-advancements-algal-biomass-yield>