The Bioeconomy Initiative:
A National Strategy for the Billion Ton Vision

Briefing Hosted by the Environmental and Energy Study Institute

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The bioeconomy is defined as: The global industrial transition of sustainably utilizing renewable aquatic and terrestrial biomass resources in energy, intermediate, and final products for economic, environmental, social, and national security benefits.

Billion Ton Studies History and Accomplishments

Billion-Ton Study (BTS), 2005
• Technical assessment of agricultural and forestry systems to supply low-valued biomass for new markets
• Identified adequate supply to displace 30% of petroleum consumption; i.e. physical availability

Billion-Ton Update (BT2), 2011
• Quantified potential economic availability of feedstocks for 20-year projection
• Publicly released county-level supply curves for 23 candidate biomass feedstocks through Bioenergy Knowledge Discovery Framework.

2016 Billion-Ton Report (BT16), 2016
• Expansion of resource assessment to include additional feedstocks and delivered supply
• Two-volume approach
Supply Curve Results

Currently Available Biomass Resources

2012 Baseline scenario at $80 per dry ton
Supply Curve Results

Potentially Available Biomass Resources

2030 Baseline scenario at $60 per dry ton
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.
Vision and Goal of the Billion Ton Bioeconomy

The vision for the Billion Ton Bioeconomy is to sustainably reach the full potential of biomass-derived products as a way of expanding our nation’s economy. In doing so, the bioeconomy will provide multiple economic, environmental, and social benefits to the Nation.

The goal of the Billion Ton Bioeconomy is to develop and provide innovative ways to remove barriers to expanding the sustainable use of Nation’s abundant biomass resources for biofuels, bioproducts, and biopower, while maximizing economic, social, and environmental outcomes.
A billion dry tons of sustainable biomass has the potential to produce:

- 1.1 million direct jobs and keeps about $250 billion in the U.S. (direct contribution and inflation adjusted).
- 85 billion kWh of electricity to power 6 million households. Plus 1050 trillion BTUs of thermal energy.
- 50 billion gallons of biofuels displacing almost 25% of all transportation fuels.
- 50 billion pounds of biobased chemicals and bioproducts, replacing a significant portion of the chemical market.
- 400 million tons of CO₂ reductions every year.

Steps to building the bioeconomy:

1. Accelerate research & technology development
2. Develop production, conversion and distribution infrastructure
3. Deploy technology
4. Create markets and delivery systems

Projections based on:
- 2016 Billion Ton Study Report (Forthcoming)
- EIA 2015 AEO
- 2015 USDA Long-Term Forecast
- Various data sources

* Includes 27 billion kWh and 90 TBtu from livestock anaerobic digestion.
### Overview of Agency Activities

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<tr>
<th>Agency</th>
<th>Feedstock Supply</th>
<th>Biomass Conversion</th>
<th>Bioenergy Distribution</th>
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**Legends:**
- ● Use an integrated systems approach
- ● Provide the science and the technology
- ● Public and private collaboration to overcome barriers and accelerate deployment
- ● Develop a workforce for the future bioeconomy
- ● Understand and inform policy
Bioeconomy Initiative Reports Plan

- Three reports in the series: FARB – released in February, 2016
- Stakeholder engagement
  - Over 400 participants involved in 5 sessions.
    - 4 in-person Listening Sessions were held in conjunction with major bioenergy industry events.
    - 1 public webinar held on May 5th.
- This report will be the second part of a staggered release of the Initiative.
- An ‘Action Plan’ will follow that will result from collaborative meetings of the Federal Agencies involved.

The Bioeconomy Initiative: Challenges and Opportunities for a Billion Ton Vision
Target Release Date: Aug, 2016

The Bioeconomy Initiative: Action Plan
Target Release date: Dec., 2016
How can we best engage the interested public in the process of developing a Billion Ton Bioeconomy?
Challenges and Opportunities

- Challenge Areas (as identified by Stakeholders)
- Ongoing Interagency Areas of Importance and Growth for the Initiative
  Food Energy Water Nexus

- Next Steps/Path Forward
  - How to move from the Strategy Report to an Action/Implementation Plan
  - Additional Stakeholder Involvement
    - State and Economic Development Agencies
    - 3-5 meetings in different regions of the country
  - Call for partners from industry/research community to ‘Join the Initiative’
ATIP Foundation Workshops – Regional Forums

• These workshops, organized by the ATIP Foundation, will focus on regional issues and their specific bioeconomy-related industries by partnering with the states rather than conferences geared to a specific industry. These workshops will take place in the late July through October timeframe.

• The feedback gathered from these formal workshops will be used to solidify and support the Action Plan that is planned for release in December of 2016.
Path Forward

The Bioeconomy Initiative: Action Plan
Target Release date: Dec., 2016

• A transition priority for the next Administration
THANK YOU!

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