



Renewable Chemicals  
and Materials Alliance

Testimony Submitted to the Biomass Research and Development  
Technical Advisory Committee  
June 12, 2016

The Renewable Chemicals & Advanced Materials Alliance (re:chem) was founded by a group of leading renewable chemical companies, all of which have earned prestigious EPA Presidential Green Chemistry Challenge Awards for their innovative work. Re:chem was formed to focus on federal and state policies that could facilitate the development of the rapidly commercializing renewable chemical sector in the US. We have had the privilege of offering comments at previous Biomass Research and Development Technical Advisory Committee meetings, and appreciate the opportunity to submit these comments today.

As reported in *An Economic Impact Analysis of the US Biobased Products Industry*, the total contribution of the biobased products industry to the U.S. economy in 2013 was \$369 billion and employment of four million workers. Some 1.5 million direct jobs resulted in 1.1 million indirect in related industries and another 1.4 jobs induced from the purchase of biobased goods & services. As we have argued for years, the renewable chemical and biobased products industry is a critical driver in the “new economy”, creating high-value jobs, investment, infrastructure and full value chain development.

Given the highly competitive global environment, US federal and state government policy plays a vital role in ensuring that renewable chemical and biobased products companies stay here, build here and expand here. Other countries offer incentives ranging from direct equity, low or zero interest loans, ten-year tax holidays and abatement, pre-permitted and built-out infrastructure as well as active recruitment for up and downstream value chain. Proactive, pragmatic US government policy and its effective implementation will enhance US competitiveness in this global arena – and ensure continued growth in the bioproducts economy with its 2.64 jobs multiplier.

From our vantage point, as pioneering voices since in the renewable chemical sector's earliest nascent stages, we recognize and applaud the progress of the federal government in working to enable the development of the US bioeconomy. Nowhere is the progress more clearly articulated than in the recently released *Federal Activities Report on the Bioeconomy*. The report documents significant interagency collaboration, enabling the burgeoning bioeconomy by working to effect change throughout the value chain: from feedstock supply, through conversion and distribution to end-use. This cross-agency approach can also ensure taxpayer dollars are most effectively deployed, and we applaud the trend toward collaboration across agencies, and collaboration between government and industry. It offers the best path forward to achieve rapid acceleration of the recent gains in the bioeconomy, and the wisest use of public resources.

Clearly, as passionate advocates for the renewable chemical industry, we heartily endorse the report's Billion Ton Bioeconomy Vision. Central to that vision is an integrated systems approach to overcome barriers and reduce financial, environmental and market risks. Without apology, as we have for several years, we submit that high-value renewable chemicals are a critical driver in the bioeconomy, cross-subsidizing and supporting the broader bioenergy agenda.

New funding opportunities, such as the MEGA-BIO: Bioproducts to Enable Biofuels, exemplify the approach that can transform the bioeconomy. Strategically targeting the development of higher-value derivative bioproducts can substantially help reduce the risks of investment in biomass production systems, conversion facilities and end-use infrastructure. All if these investments are crucial to achieving the bioenergy agenda, reducing US reliance on foreign, creating jobs and reducing greenhouse gas emissions.

However, it is critical the full range of government funding opportunities be aligned if we are to truly realize the ambitious vision for a Billion Ton Bioeconomy. The US Department of Energy's recently issued *Project Development for Pilot and Demonstration Scale Manufacturing of Biofuels, Bioproducts and Biopower* funding opportunity is a case in point. There is more than \$90 million on the table to put steel in the ground, bringing technology out of the lab and that much closer to the market. It held great promise as a catalyst for true sector development, just at a time when a struggling industry truly needed it.

Unfortunately, the nuances of this funding opportunity operate in contradiction to the Billion Ton Vision. Rather than equitably supporting the manufacture of biofuels, bioproducts and biopower, allowing the bioeconomy to truly develop and flourish, it severely restricts project eligibility. The primary product output for allowable cellulosic, algal and biogas feedstocks has to be a statutorily defined advanced biofuel. Further, that biofuel has to be a liquid at STP (Standard Temperature and Pressure, 25 °C and 1 atmosphere pressure) conditions, suitable for use as an infrastructure compatible blendstock that can be co-processed or co-distributed with petroleum derived fuels. And, applications only proposing to produce alcohols or other intermediates without conversion to finished biofuels are disqualified.

While co-products were allowed, this pilot and demonstration funding opportunity's singular focus on a specific biofuel output precluded many emerging bioeconomy players. The list of companies opting not to pursue this opportunity includes not only renewable chemical manufacturers. Companies with a hybrid portfolio of biofuels and biochemical products also found the highly restrictive output requirements were simply too burdensome. These are companies poised to deliver on the Billion Ton vision. And, unfortunately, in this instance, government policy missed a huge opportunity to help.

This particular funding opportunity also ignores lessons learned about the inherent need for collaboration all along value chain, both up and downstream. We've learned no start up can solve all value chain bottlenecks and that forward-looking policy must embrace this reality.

Our hope is that future funding opportunities truly reflect the diversity of the nation's growing bioeconomy, or it will be very difficult to reach our collective aspirational

goal. Government policy should drive the best innovation the sector has to offer, regardless of feedstock, technology or products, as in the end that is the true path toward a Billion Ton Bioeconomy.