



Biorenewable
Deployment
Consortium[™]



News Release

October 6, 2015

BDC Symposium Held in Ottawa with Ensyn Facility Tour Focus on Canadian/US Bio-Industry Regulations & Commercial Progress

Ottawa, ON – The *Biorenewable Deployment Consortium* (BDC) Fall Symposium was held in Ottawa, Ontario on September 29-30 and was combined with a site visit to Ensyn's production facility in Renfrew, just outside of Ottawa. The Symposium had record attendance, including a diverse group of international members and guests. Discussions included updates from leading cellulosic bioproducts companies as well as presentations from relevant Canadian and US Government agencies. Highlights included:

- Keynote by Jonathan Male, Director of Bioenergy Technologies for US DOE regarding opportunities in a changing energy landscape.
- Presentation by Otavio Pontes, Vice President, Latin America Division of Stora Enso Biomaterials on extracting additional value from Biomass.
- Panel on Regulatory Pathways, which included Paul Argyropoulos, Senior Policy Adviser, EPA, Todd Campbell, Energy & Bioeconomy Policy Advisor, USDA, Elliot Levine, Technology Manager, US DOE, Jean-Francois Levasseur, IFIT Program Leader, Natural Resources Canada, and private industry representatives.
- Commercial Progress updates provided by **Licella** (Commercial Project to convert biomass and lignite to bio-crude oil and chemicals in Australia and working toward a North American commercial project), **Borregaard/LignoTech** (Lignin Joint Venture planned for North America), **West Fraser** (Start-up of LignoForce lignin extraction plant in Hinton, AB), Green Biologics (Repurposing Minnesota ethanol plant to n-butanol), **TRI/Fulcrum** (MSW to jet fuel project in Nevada), and **Ensyn** (Commercial plant in Renfrew, Ontario and new projects in Brazil, Canada and the US).
- Success Story by Dr. Robert Graham, CEO and founder of Ensyn, who had the vision in 1984 to establish Ensyn with a specific focus on the production of high value products through fast thermal conversion of carbon-based feedstocks. Dr. Graham presented the history of Ensyn, starting from the theoretical foundation of Ensyn's Rapid Thermal Processing (RTP®) technology, through the early commercialization of the technology in food chemicals and heating fuels and to the current build out of production capacity for a broader commercialization of heating fuels and for the introduction of refinery coprocessing. With over 40 million gallons of historical production, Ensyn is now embarking on an ambitious buildout of capacity for the fuels business, starting with its existing 3 million gallon/year facility in Renfrew, Ontario, with new commercial projects under development in Brazil and North America. Ensyn has approved existing pathways under the RFS program for

heating and refinery coprocessing applications for its key product known as RFO. Ensyn is currently generating RINs from commercial RFO heating contracts in Northeastern US. Ensyn is executing its business plan by working closely with several industry leaders including Honeywell UOP, Fibria Celulose and Chevron Technology Ventures.

- Tour of the 3 million gallon/year Ensyn facility in Renfrew. This commercial facility was commissioned in 2006 as a merchant plant for the chemicals and heating fuels business and was enhanced in 2014 as a dedicated fuels production facility to meet market demand for heating oil in Northeast United States and Canada and for commercialization of refinery applications.

BDC's mission is to help deploy economic bioprocesses; operations that will be economic without government subsidy long-term. In addition to its efforts to broker partnerships for deployment projects, BDC holds two symposiums each year to provide education in areas that its membership has interest and includes a related tour of a leading edge bio-facility. BDC's membership is made up of Forestry companies, Pulp and Paper Companies, and Bioprocess Companies, and is well attended by government agencies (*see members*). The diverse make-up of the membership and environment of the meetings lead to good and honest discussion that is helpful in accelerating the bio-industry progress.

BDC is thankful to Ensyn, who hosted the tour for the BDC membership. The success of the meeting is due to a combination of the mission of the organization, the make-up and participation of the membership and guests, and the ingenuity and progress of the entrepreneurial management teams in the up and coming bio-industry.

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1) Paul Argyropoulos, Senior Policy Adviser, EPA, presenting at the BDC Fall Symposium

2) Dr. Robert Graham, Ensyn's CEO and Chairman, receiving an Achievement Award from BDC

3) BDC members during the tour of Ensyn's three million gallon/year facility in Renfrew, Ontario



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