

# Advances in biofuel market opportunities

16-18<sup>th</sup> November 2015, Hamilton

The Bioenergy Association invites you to its annual Liquid Biofuels Conference. For those parties interested in the heavy fuels market where bio-oils are likely to be an early path to commercialization of liquid biofuels from biomass and municipal waste, this event is for you.

The event will cover all liquid biofuels but will specifically be of interest for marine, rail and other users of heavy fuel oils to get an update on progress being made towards having biofuels available for their applications. The Conference is an opportunity to meet others in the sector and get an update on technology and fuel developments.

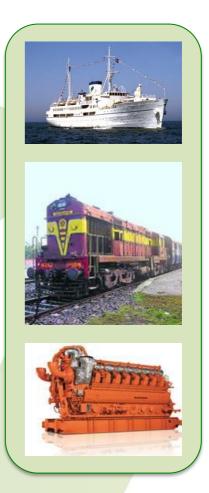
## **Event Focus:**

The Conference will focus on the markets for bio-oils and other biofuels and will be structured around the work of several market commentators, technology developers, and users outlining market demands.

The focus of this event will be to:

- Obtain an update of the emerging liquid biofuels market
- Here from an international engine manufacturer of their success in using biofuels in their engines.
- See how niche markets are likely to be a pathway forward
- See bio-oil being produced.

The Conference will be preceded on the 16<sup>th</sup> November by a demonstration of the production of pyrolysis oil and followed on the 18<sup>th</sup> November by a symposium convened by the Advanced Biofuels Research Network outlining advanced biofuel research being undertaken throughout New Zealand.



# **Registration:**

Discounts are available for attendees also attending the ABRN workshop on the 18<sup>th</sup> November.

Complete the Registration Form on the Bioenergy Association website to secure your place at this event: <a href="http://www.bioenergy.org.nz/event/advances-biofuel-market-opportunities">http://www.bioenergy.org.nz/event/advances-biofuel-market-opportunities</a>

Attendance at the pyrolysis oil demonstration is free.

**Conference Sponsors:** The Bioenergy Association welcomes the support of the following sponsors:















# The 5th Science Symposium on Next Generation Liquid Biofuels and Co-Products:

The 5th Science Symposium on Next Generation Liquid Biofuels and Co-Products hosted by the Advanced Biofuels Research Network will be held on the following day 18th of November.

The Science Symposium will give you an opportunity to:

- · Understand the biofuel research landscape in New Zealand.
- Further develop collaborations with other New Zealand research groups.
- · Receive an update on world-wide developments from international experts.
- Interact with researchers, government, and industry interested in biofuels.
- Have your say on the activities of the Advanced Biofuels Research Network.

Information on the symposium is available here

http://www.bioenergy.org.nz/event/next-generation-liquid-biofuels-and-co-products

# View a demonstration of a mobile pyrolysis plant

Preceding the conference attendees will be able to see the AES mobile pyrolysis plant operating and producing bio-oil from wood residues.

## **Programme change**

#### **Mobile Pyrolysis demonstration**

Due to access issues outside our control the demonstration by AES of bio-oil being produced using their mobile pyrolysis plant is now not able to be undertaken at the University on Tuesday 17 Nov. It will now be held between 3-5pm on Monday 16 Nov at 156 Glenbrook Station Rd Glenbrook (Property RC Wymer) in South Auckland.

However, if you have prior commitments and can't make it on the 16<sup>th</sup>, Gavin has offered to also operate the plant on the Thursday morning after the conference.

#### **Conference Dinner:**

A dinner will be held for attendees of either or both events at the Hotel Ibis Tainui in Hamilton on the 17<sup>th</sup> November at 7.00pm. Indicate if you would like to attend the dinner on the Registration Form.

## **Continuing Professional Development:**

The Bioenergy Association supports members by providing opportunities such as this workshop that contribute towards Continuing Professional Development credits. Contact the Executive Officer for more details at <a href="mailto:executive@bioenergy.org.nz">executive@bioenergy.org.nz</a>

	Conference Programme	
	17 November 2015	
8.30 – 9.00	Registration	
9.00 – 9.05	Welcome and Introduction - Brian Cox, BANZ Executive Officer	
9.05 – 9.20	Conference Opening	
	Simon Arnold, Convener, Liquid Biofuels Interest Group	
	Key note speakers	
9.20 - 9.50	Biofuel for large engine applications: Wartsila experience  Luca Febbraio, General Manager Energy Solutions, Wärtsilä Australia	
9.50 -10.20	Update on Licella's commercial demonstration plant	
	Bill Rowlands, Chief Scientist, Licella and Ignite Energy Resources, Sydney	
10.20 - 10.50	Tea Break Sponsored by Greenfuels NZ	
	Liquid biofuels market drivers	
10.50 – 11.15	Converting biomass into renewable diesel	
	Peter Brown and Proton Power, California	
11.15 – 11.35	Pathways for transport biofuels	
	Paul Bennett, Science Leader, Clean Technologies, Scion	
11.35 – 12.00	The breadth of products that can be made from biochar  John McDonald-Wharry, Waikato University	
12.00 – 12.20	The biodiesel market is alive and well	
12.00 – 12.20	Martin Johnson, Greenfuels NZ	
	,	
12.20 - 1.20	Lunch Sponsored by Gull	
12.20 - 1.20	and the second s	
1.20 – 1.20	Lunch Sponsored by Gull  Pyrolysis commercialization  INTERNATIONAL SPEAKER	
	Pyrolysis commercialization	
	Pyrolysis commercialization  INTERNATIONAL SPEAKER  Professor Jöerg Sauer, Institute of Catalysis Research (IKFT), Karlsruhe Institute of Technology,	
1.20-1.50	Pyrolysis commercialization  INTERNATIONAL SPEAKER  Professor Jöerg Sauer, Institute of Catalysis Research (IKFT), Karlsruhe Institute of Technology, Germany.	
1.20-1.50	Pyrolysis commercialization  INTERNATIONAL SPEAKER  Professor Jöerg Sauer, Institute of Catalysis Research (IKFT), Karlsruhe Institute of Technology, Germany.  Fitting the market to the technology	
1.20- 1.50 1.50 - 2.10	Pyrolysis commercialization  INTERNATIONAL SPEAKER  Professor Jöerg Sauer, Institute of Catalysis Research (IKFT), Karlsruhe Institute of Technology, Germany.  Fitting the market to the technology  Simon Arnold, Blended Fuel Solutions (NZ)	
1.20- 1.50 1.50 - 2.10	Pyrolysis commercialization  INTERNATIONAL SPEAKER  Professor Jöerg Sauer, Institute of Catalysis Research (IKFT), Karlsruhe Institute of Technology, Germany.  Fitting the market to the technology Simon Arnold, Blended Fuel Solutions (NZ)  Progress towards developing a 50tonne/day fast pyrolysis plant Gavin Hedley, AES  An overview of the liquid biofuels market in New Zealand	
1.20-1.50 1.50-2.10 2.10-2.30 2.30-2.50	INTERNATIONAL SPEAKER Professor Jöerg Sauer, Institute of Catalysis Research (IKFT), Karlsruhe Institute of Technology, Germany.  Fitting the market to the technology Simon Arnold, Blended Fuel Solutions (NZ)  Progress towards developing a 50tonne/day fast pyrolysis plant Gavin Hedley, AES  An overview of the liquid biofuels market in New Zealand Andrew Campbell, EECA	
1.20-1.50 1.50-2.10 2.10-2.30	Pyrolysis commercialization  INTERNATIONAL SPEAKER  Professor Jöerg Sauer, Institute of Catalysis Research (IKFT), Karlsruhe Institute of Technology, Germany.  Fitting the market to the technology Simon Arnold, Blended Fuel Solutions (NZ)  Progress towards developing a 50tonne/day fast pyrolysis plant Gavin Hedley, AES  An overview of the liquid biofuels market in New Zealand	
1.20-1.50 1.50-2.10 2.10-2.30 2.30-2.50	Pyrolysis commercialization  INTERNATIONAL SPEAKER  Professor Jöerg Sauer, Institute of Catalysis Research (IKFT), Karlsruhe Institute of Technology, Germany.  Fitting the market to the technology Simon Arnold, Blended Fuel Solutions (NZ)  Progress towards developing a 50tonne/day fast pyrolysis plant Gavin Hedley, AES  An overview of the liquid biofuels market in New Zealand Andrew Campbell, EECA  Tea breakSponsored by Covey Consulting  INTERNATIONAL SPEAKER	
1.20-1.50 1.50-2.10 2.10-2.30 2.30-2.50 2.50-3.20	INTERNATIONAL SPEAKER Professor Jöerg Sauer, Institute of Catalysis Research (IKFT), Karlsruhe Institute of Technology, Germany.  Fitting the market to the technology Simon Arnold, Blended Fuel Solutions (NZ)  Progress towards developing a 50tonne/day fast pyrolysis plant Gavin Hedley, AES  An overview of the liquid biofuels market in New Zealand Andrew Campbell, EECA  Tea breakSponsored by Covey Consulting  INTERNATIONAL SPEAKER Techno-Economic Challenges of Fast Pyrolysis Commercialization	
1.20-1.50 1.50-2.10 2.10-2.30 2.30-2.50 2.50-3.20 3.20-4.00	INTERNATIONAL SPEAKER Professor Jöerg Sauer, Institute of Catalysis Research (IKFT), Karlsruhe Institute of Technology, Germany.  Fitting the market to the technology Simon Arnold, Blended Fuel Solutions (NZ)  Progress towards developing a 50tonne/day fast pyrolysis plant Gavin Hedley, AES  An overview of the liquid biofuels market in New Zealand Andrew Campbell, EECA  Tea breakSponsored by Covey Consulting  INTERNATIONAL SPEAKER Techno-Economic Challenges of Fast Pyrolysis Commercialization Peter Fransham, ABRI-Tech Inc, Namur, Quebec, Canada (by video link)	
1.20-1.50 1.50-2.10 2.10-2.30 2.30-2.50 2.50-3.20	INTERNATIONAL SPEAKER Professor Jöerg Sauer, Institute of Catalysis Research (IKFT), Karlsruhe Institute of Technology, Germany.  Fitting the market to the technology Simon Arnold, Blended Fuel Solutions (NZ)  Progress towards developing a 50tonne/day fast pyrolysis plant Gavin Hedley, AES  An overview of the liquid biofuels market in New Zealand Andrew Campbell, EECA  Tea breakSponsored by Covey Consulting  INTERNATIONAL SPEAKER Techno-Economic Challenges of Fast Pyrolysis Commercialization Peter Fransham, ABRI-Tech Inc, Namur, Quebec, Canada (by video link)  Beyond fuels – high value chemicals from biowaste.	
1.20-1.50 1.50-2.10 2.10-2.30 2.30-2.50 2.50-3.20 3.20-4.00	INTERNATIONAL SPEAKER Professor Jöerg Sauer, Institute of Catalysis Research (IKFT), Karlsruhe Institute of Technology, Germany.  Fitting the market to the technology Simon Arnold, Blended Fuel Solutions (NZ)  Progress towards developing a 50tonne/day fast pyrolysis plant Gavin Hedley, AES  An overview of the liquid biofuels market in New Zealand Andrew Campbell, EECA  Tea breakSponsored by Covey Consulting  INTERNATIONAL SPEAKER Techno-Economic Challenges of Fast Pyrolysis Commercialization Peter Fransham, ABRI-Tech Inc, Namur, Quebec, Canada (by video link)  Beyond fuels — high value chemicals from biowaste. Geoff Covey, Covey Consulting	
1.20-1.50 1.50-2.10 2.10-2.30 2.30-2.50 2.50-3.20 3.20-4.00	INTERNATIONAL SPEAKER Professor Jöerg Sauer, Institute of Catalysis Research (IKFT), Karlsruhe Institute of Technology, Germany.  Fitting the market to the technology Simon Arnold, Blended Fuel Solutions (NZ)  Progress towards developing a 50tonne/day fast pyrolysis plant Gavin Hedley, AES  An overview of the liquid biofuels market in New Zealand Andrew Campbell, EECA  Tea breakSponsored by Covey Consulting  INTERNATIONAL SPEAKER Techno-Economic Challenges of Fast Pyrolysis Commercialization Peter Fransham, ABRI-Tech Inc, Namur, Quebec, Canada (by video link)  Beyond fuels — high value chemicals from biowaste. Geoff Covey, Covey Consulting  What will it take for biofuels to be implemented in NZ?	
1.20-1.50 1.50-2.10 2.10-2.30 2.30-2.50 2.50-3.20 3.20-4.00 4.00-4.20 4.20-4.55	INTERNATIONAL SPEAKER Professor Jöerg Sauer, Institute of Catalysis Research (IKFT), Karlsruhe Institute of Technology, Germany.  Fitting the market to the technology Simon Arnold, Blended Fuel Solutions (NZ)  Progress towards developing a 50tonne/day fast pyrolysis plant Gavin Hedley, AES  An overview of the liquid biofuels market in New Zealand Andrew Campbell, EECA  Tea breakSponsored by Covey Consulting  INTERNATIONAL SPEAKER Techno-Economic Challenges of Fast Pyrolysis Commercialization Peter Fransham, ABRI-Tech Inc, Namur, Quebec, Canada (by video link)  Beyond fuels — high value chemicals from biowaste. Geoff Covey, Covey Consulting  What will it take for biofuels to be implemented in NZ? Panel: Paul Bennett, Simon Arnold, Vincent Smart (EECA)	
1.20-1.50  1.50-2.10  2.10-2.30  2.30-2.50  2.50-3.20  3.20-4.00  4.00-4.20  4.20-4.55  4.55-5.00	INTERNATIONAL SPEAKER Professor Jöerg Sauer, Institute of Catalysis Research (IKFT), Karlsruhe Institute of Technology, Germany.  Fitting the market to the technology Simon Arnold, Blended Fuel Solutions (NZ)  Progress towards developing a 50tonne/day fast pyrolysis plant Gavin Hedley, AES  An overview of the liquid biofuels market in New Zealand Andrew Campbell, EECA  Tea breakSponsored by Covey Consulting  INTERNATIONAL SPEAKER Techno-Economic Challenges of Fast Pyrolysis Commercialization Peter Fransham, ABRI-Tech Inc, Namur, Quebec, Canada (by video link)  Beyond fuels – high value chemicals from biowaste. Geoff Covey, Covey Consulting  What will it take for biofuels to be implemented in NZ? Panel: Paul Bennett, Simon Arnold, Vincent Smart (EECA)  Conference Closing	
1.20-1.50 1.50-2.10 2.10-2.30 2.30-2.50 2.50-3.20 3.20-4.00 4.00-4.20 4.20-4.55	INTERNATIONAL SPEAKER Professor Jöerg Sauer, Institute of Catalysis Research (IKFT), Karlsruhe Institute of Technology, Germany.  Fitting the market to the technology Simon Arnold, Blended Fuel Solutions (NZ)  Progress towards developing a 50tonne/day fast pyrolysis plant Gavin Hedley, AES  An overview of the liquid biofuels market in New Zealand Andrew Campbell, EECA  Tea breakSponsored by Covey Consulting  INTERNATIONAL SPEAKER Techno-Economic Challenges of Fast Pyrolysis Commercialization Peter Fransham, ABRI-Tech Inc, Namur, Quebec, Canada (by video link)  Beyond fuels — high value chemicals from biowaste. Geoff Covey, Covey Consulting  What will it take for biofuels to be implemented in NZ? Panel: Paul Bennett, Simon Arnold, Vincent Smart (EECA)	

8.30am 18<sup>th</sup> November Science symposium - Next Generation Liquid Biofuels and Co-products