Biofuels Outlook in an Era of Low Oil Prices

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Global Biodiesel Focus 2015 December 10-11, 2015



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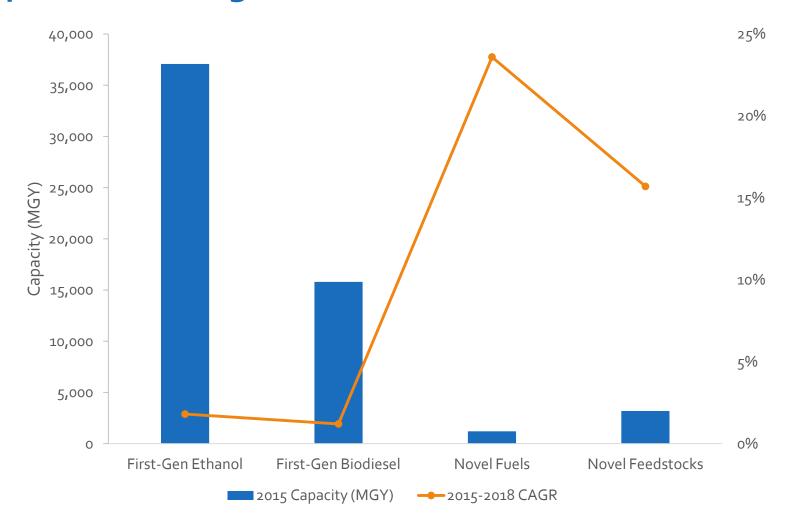


Agenda

- Global biofuels outlook and volatile oil prices
- > Roadmap to success with next-generation fuels
- > Identifying opportunities in the biofuels space

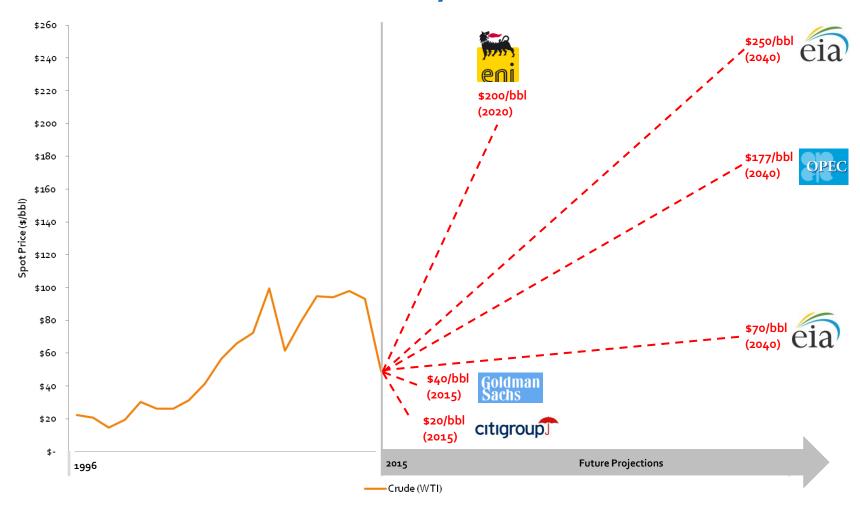


Next-generation biofuels are driving capacity expansion through 2018





Historical volatile spikes and dips in oil prices with a future filled with uncertainty



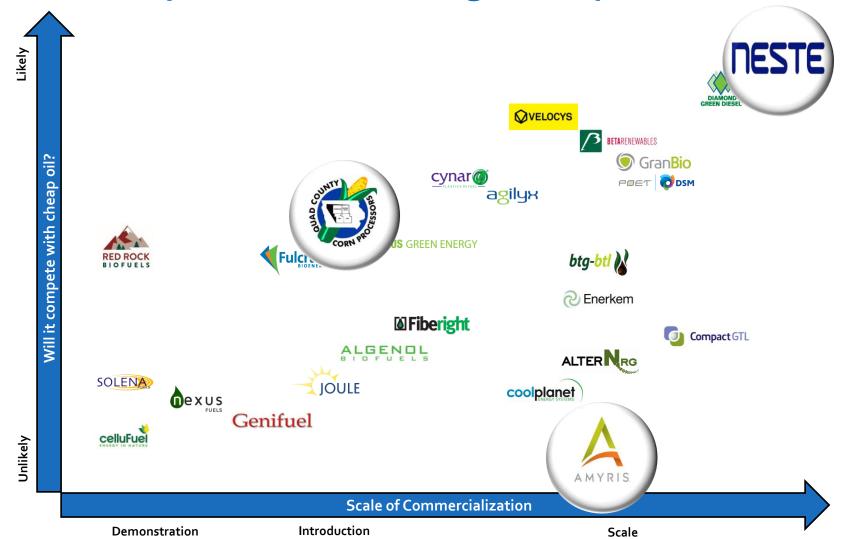


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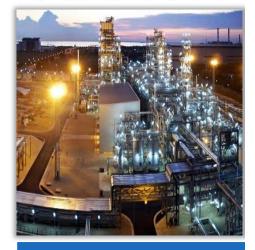
Likelihood of 25 high-profile companies to compete with cheap oil and the strategies they instill





Neste dominates the renewable diesel space with three peers following close behind

NESTE



Neste

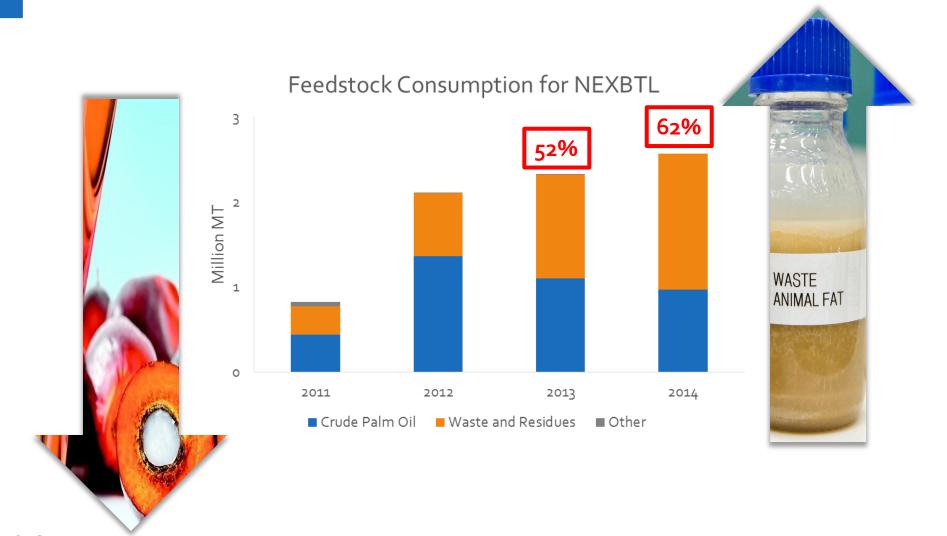
2007, 2009, 2010, 2011

810 MGY capacity (3 facilities)

CPO, animal fats, tall oil



Tapping into low-cost feedstocks reduced Neste's production costs by nearly 15% in 2014



uxresearch

Despite numerous delays, commercial cellulosic ethanol projects are now online and producing











2013

2014

2015











OGEN®

Bolt-on technology offers a capital-light approach to cellulosic ethanol production



News Releases

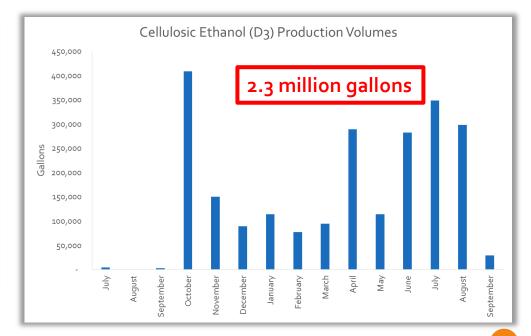
Quad County Corn Processors hits million-gallon cellulosic milestone

04.09.15

- Cellerate[™] process technology helps QCCP increase ethanol production
- · Bolt-on process converts corn kernel fiber into cellulosic ethanol
- · QCCP recognized by the Renewable Fuels Association for advancing the use of cellulosic ethanol technology

MINNETONKA, Minn., U.S.A. – Syngenta announced today that Quad County Corn Processors (QCCP) has produced its one millionth gallon of cellulosic ethanol through the use of Cellerate™ process technology at its Galva, Iowa, ethanol production facility. This milestone puts QCCP on track to produce 2 million gallons of cellulosic ethanol per year.





ASTM approval of farnesene as jet fuel blendstock likely the last you hear about Amyris' fuel ambitions





Amyris	Brotas, Brazil
Nameplate Capacity	40 million liters per year
Feedstock	Sugarcane
Product	Farnesene
Operational	December 2012

Amyris Renewable Jet Fuel Receives Regulatory Approval in Brazil

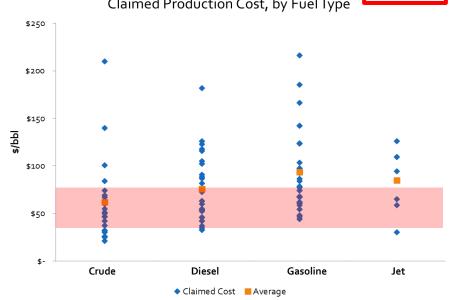
Dec 16, 2014 | General Release | 1 comment

Brazil Now Cleared for Flying With Locally-Produced, Sugarcane-Derived Jet Fuel as Study Indicates That Amyris's Renewable Fuels Greatly Reduce Greenhouse Gas Emissions Compared to Fossil Fuels

SAO PAULO, Dec. 16, 2014 (GLOBE NEWSWIRE) — Amyris, Inc. (Nasdag:AMRS) welcomed the approval of its renewable jet fuel by Brazil's fuels regulator, ANP, clearing the way for the commercialization in Brazil of the Amyris renewable jet fuel in blends of up to 10 percent.

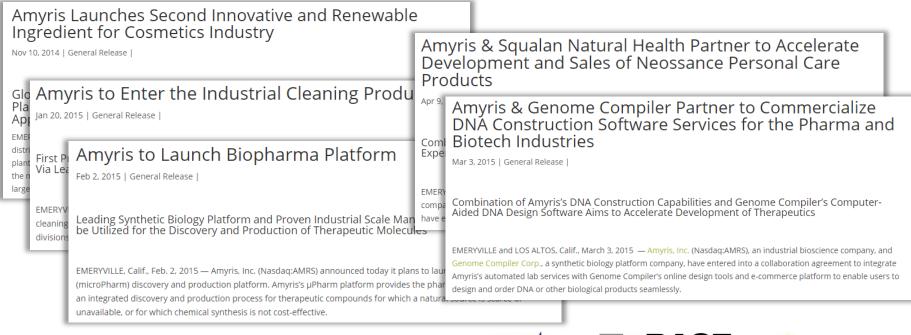
Claimed Production Cost, by Fuel Type

\$278/bbl



Amyris' high-value product and flexibility allows it to enter a wide range of markets

"We're pleased with our continued execution towards diversifying and growing our revenue base through an **expanding** number of collaborations and production commercial efforts." - John Melo, President & CEO















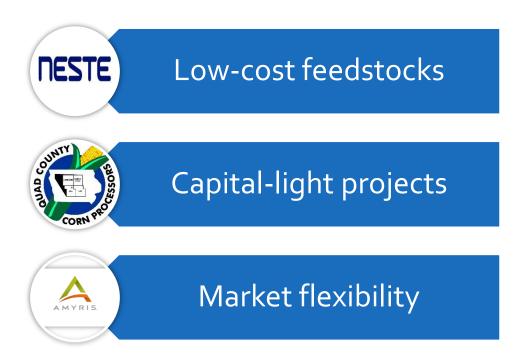








Three strategies enabling next-generation alternative fuel companies to grow



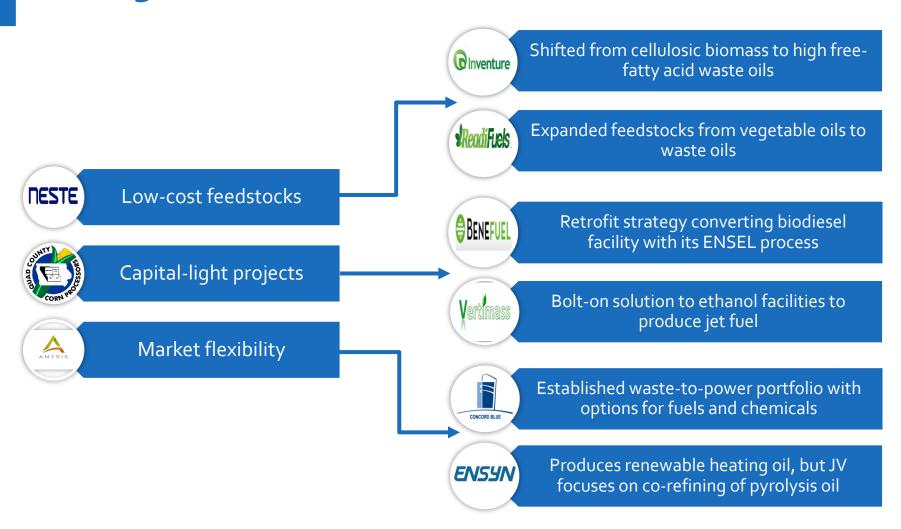


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High-potential companies implementing similar strategies





Companies share qualities correlated with likelihood of success

		Lux Take	Management	Partnerships	Momentum
Shifted from cellulosic fatty acid			4X	√	2.5X
Readifies Expanded feedstocks f		2X	√	√	2.5X
		Lux Take	Management	Partnerships	Momentum
	onverting biodiesel ENSEL process		4 X	2X	2.5X
Vertimass Bolt-on solution to e produce			4X	√	2.5X
		Lux Take	Management	Partnerships	Momentum
Established waste-to- options for fuels		2X	1	2X	2.5X
Produces renewable focuses on co-refin		2X	√	2X	2.5X



Conclusion

- > Global biofuels growth will come from next-generation biofuels
- > Cost-reduction strategies vital in an era of low oil prices
- > Statistically significant scorecard metrics identify future winners



Thank you



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