

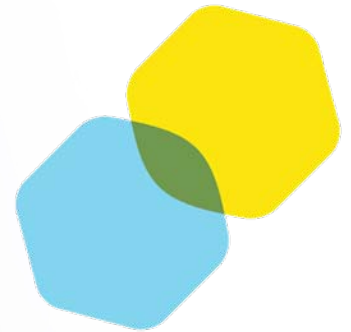
A Commercial Development Perspective on Biomass Gasification

tcBiomass2009
Gasification Panel Discussion

Craig Brown
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Catchlight
Energy™

A Chevron | Weyerhaeuser
Joint Venture



What is Catchlight Energy?



- **50–50 Joint venture of Weyerhaeuser and Chevron**
 - Created to commercialize large scale production of liquid transportation fuels from sustainable forest based resources
- **Business Model**
 - Parents will fund R&D and provide capital for conversion plants
 - Conversion technology both internally developed and licensed from 3rd parties

Forest to Fuel Value Chain A Viable Business Model



Catchlight Energy

End-to-end value chain solution
Unique in the market

We Recognize the Obstacles



- Key driving forces are outside our control
 - Competing oil prices; federal incentives; policy
- Proven, commercially viable, conversion processes are not readily available today
 - Initial focus of CLE will be R&D to discover, develop, and/or license the commercial solutions
- Achieving scale production of sustainable biomass consistent with billions of gpy of LTF – i.e. tens of millions tpy of biomass
 - Build on Weyerhaeuser's land & forestry base, infrastructure
 - Energy crops in conjunction with high value timber

CLE view on biomass gasification



The opportunity

- May be a good bet for early commercialization.
- Capable of handling diverse “forest-based” feedstocks
- Scalable – 1000 to 3000 tpd biomass input is possible

Some of the challenges

- Breaking through the demo and commercial hurdles
- Limited demo and commercial experience producing syngas
- Reducing capex and opex
- The tar problem
- Trace contaminants – Biomass gasification’s next “Achille’s heal”?