

Bio Pacific Rim Summit on
Biotechnology & Bioenergy

INEOS Bio

Indian River BioEnergy Center

Dan Cummings
Vice President
INEOS Bio
October 12, 2012

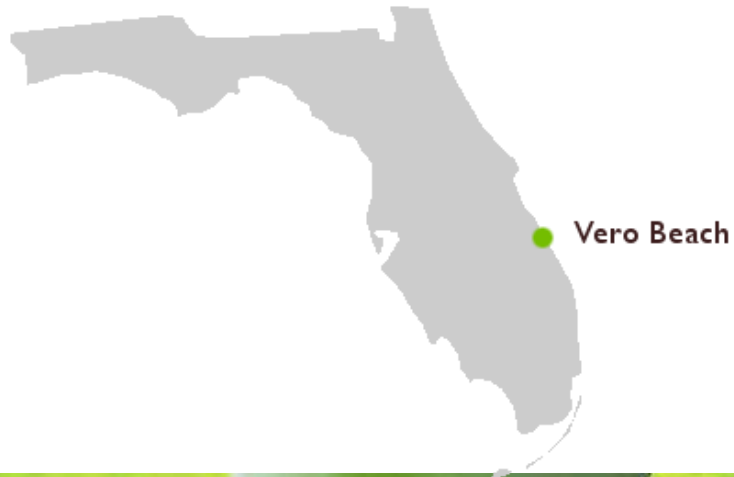


INEOS Group



- A global petrochemical company
 - Privately held, headquartered in Switzerland
 - 2011 turnover \$42bn
 - Vertically integrated from refining to chemicals
 - Global petrochemical and polymer asset base
 - Established producer of biodiesel and ethanol
- Major European refiner
 - PetroChina JV - total 425,000 bbls/day
- Market leading developer and licensor of chemical technology
 - Expertise in technology development, scale-up and commercialization

First INEOS Bio Plant Vero Beach, Florida



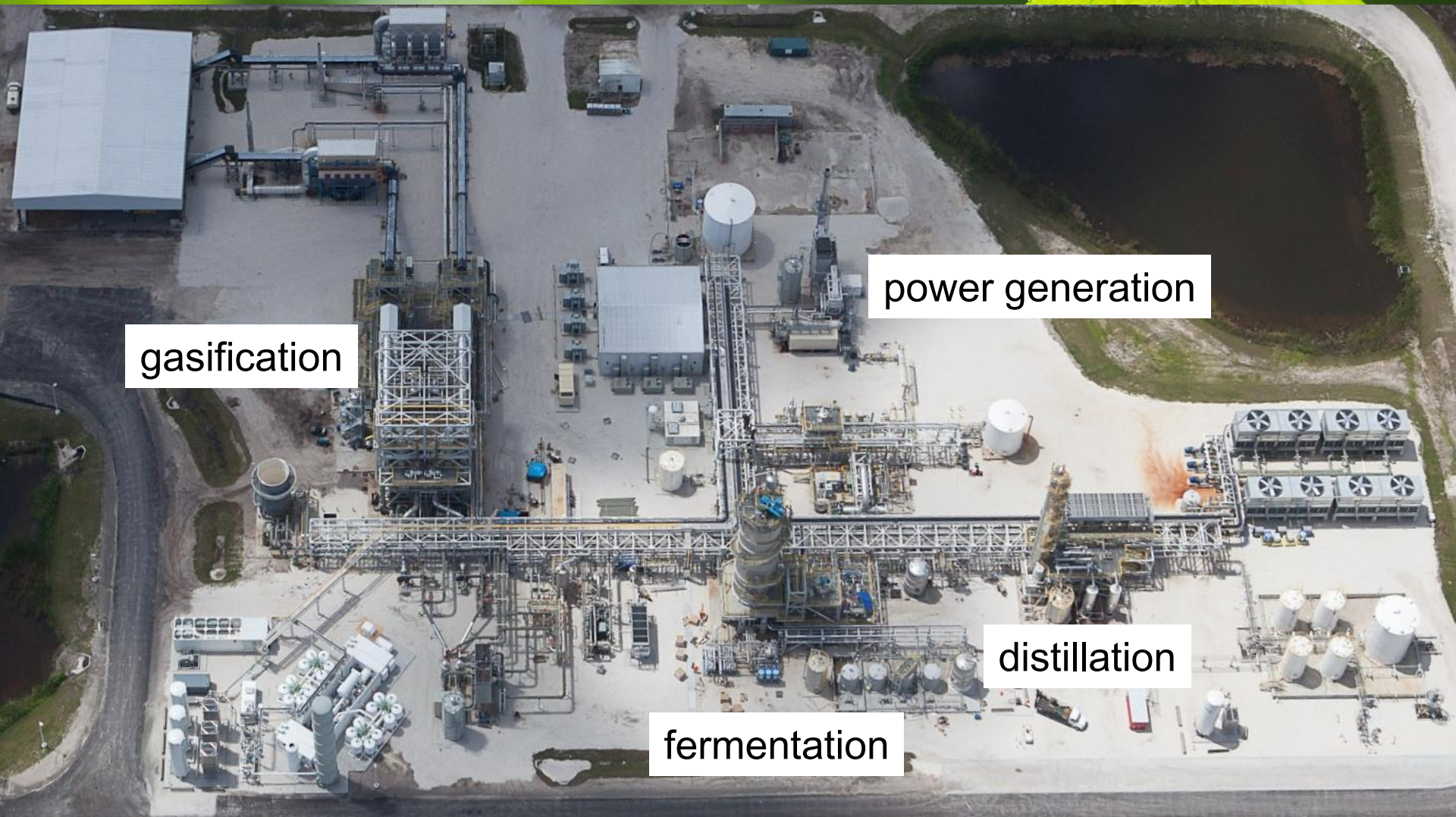
- Key parameters :
 - 8mmgal/yr cellulosic ethanol
 - 6 MW gross power generated
- Vegetative & Yard Waste + MSW
- Strong US, State government partnership
- Ground broken in February 2011
- Construction completed - June 2012
- Currently being commissioned
- EPA Registration RFSII - Aug 2012
- Cellulosic Ethanol Production 4Q 2012

Vero Beach August 2012



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Vero Beach Feedstock and Gasifiers



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Economic Benefits

- Total Jobs - over 400 created & retained
 - Over \$25m+ into FL Economy alone (Wages, sub contracts, etc)
- Full time jobs - 60
 - Average wage & benefits - \$50k/yr (Higher than county avg)
 - \$3m in payroll to local economy
 - Change in unemployment - 14% to 12.2% (Indian River County)
- 90% of equipment - U.S. Sourced
 - 8+ states for equipment & engineering- NY, VA, TX, IL, OH, FL, GA, SC
- Feedstock - local Vegetative, Agricultural & Yard waste and Landfill Gas
 - MSW in the future after initial start-up

A Global Vision for Waste Conversion

Next Steps

- Deploy technology globally
 - Owner operator and partnerships combined with licensing
 - Full range of biomass feedstocks
 - Utilizing existing biomass logistics and processing infrastructure
 - Fit for purpose community centered & large industrial scale
- Leverage INEOS strengths
- Extend to chemicals and polymers
- Patience and hard work

INEOS Bio: Distinctive Benefits

- True feedstock flexibility
 - Unique biomass gasification
 - Robust fermentation
 - Continuous process
- Produces ethanol *and* power with high energy efficiency
- Meets toughest sustainability criteria
- EPA registration for production and sale of advanced bioethanol from non-food vegetative waste materials
- Technology, operational capabilities, and global footprint of INEOS
- And....

The First Commercial Biomass Biorefinery is Here



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