# Biomass Pyrolysis — Technology and Market Assessment

**Case Study** 



# Case study: Business case and solution

Biomass Pyrolysis

Client	An integrated oil and gas player
Industry	Energy
Products	Biomass pyrolysis

#### Context

As part of its sustainability initiatives, Client was interested in evaluating biomass pyrolysis route for
production of transportation fuels or refinery base chemicals; Client wanted to evaluate pyrolysis and its
up-gradation technologies to identify different application areas

## **Key Business Questions**

- What are the most prominent up-gradation technologies available to convert pyrolysis oil to product?
- What are new application areas of pyrolysis oil adopted by competitors?

## **Engagement Scope**



## **Technology Assessment**

- Identified technologies that can be used to upgrade the existing pyrolysis oil for converting it into useful chemicals and end products
- Identified key parameters such as, production process, effect of feedstock price, and availability, which impact the cost of production
- Identified typical specifications of pyrolysis oil depending on the pyrolysis technology

# 2

## Competitor Assessment

- Probed about the key initiatives taken by competitors in domain of pyrolysis oil application
- Identified competitors patenting and other business activity in this domain to identify their road-map to understand their strategic direction

# 3

## **Key Results and Insights**

- Identified different up-gradation technologies available for conversion of pyrolysis oil to useful products and highlighted prominent technology by comparative technology benchmarking
- Comparative analysis of Client's offerings/ technologies with those of its competitors to understand the technology gaps
- Highlighted competitor's activity in the domain of biomass pyrolysis



# Case study: Methodology and benefits to client

**Biomass Pyrolysis** 

## Research Methodology

#### **Secondary Research**

- Conducted desk research to identify different up-gradation technologies explored at commercial scale or demonstration scale
- Studied both patent and non-patent literature to highlight key application areas and technologies still in research stage

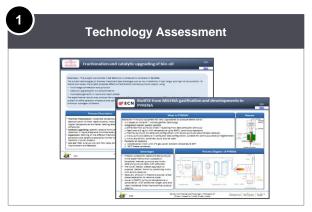
#### **Primary Research**

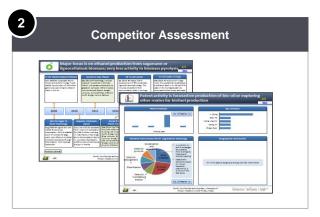
 Conducted 10+ telephonic interview with technology developers and industry experts to understand the preferred pyrolysis oil upgradation technologies

#### **Benefits to Client**

- The study helped in achieving visibility about the most prominent application areas for pyrolysis oil utilization
- Comparative assessment of different technologies helped in identifying most cost competitive ones and having greater yield
- Competition assessment helped in chalking out strategies in order to remain ahead in the race

# **Sample Analysis**







**FutureBridge** 

# Thank you

#### **North America**

55 Madison Ave, Suite 400 Morristown, NJ 07960 USA

T: +1 212 835 1590

#### **Europe**

328-334 Graadt van Roggenweg 4th Floor, Utrecht, 3531 AH Netherlands

T: +31 30 298 2108

## **United Kingdom**

5 Chancery Lane London EC4A 1BL United Kingdom

T: +44 207 406 7548

#### **Asia Pacific**

Millennium Business Park Sector 3, Building # 4, Mahape Navi Mumbai 400 710 India

T: +91 22 6772 5700