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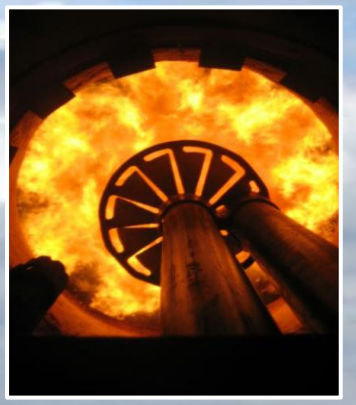


Ensyn Corporation

ABLCNext October 2023

Robert Graham, PhD
Chairman

Ensyn's Business

Our business:

Production of low-carbon, renewable fuels and chemicals from cellulosic biomass

Our business model:

Build-own-operate, with strategic alliances, plus licensing

Our growth strategy:

A platform – rapidly increase production capacity based on an anchor product and expand into additional products using that platform

Growth Strategy: Platform Technology & Anchor Product

CELLULOSIC FEEDSTOCK

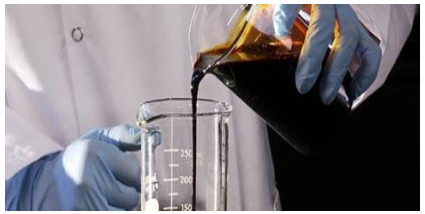
CELLULOSIC BIOMASS

"Advanced", non-food feedstock

PLATFORM TECHNOLOGY

RTP®
FAST THERMAL CONVERSION

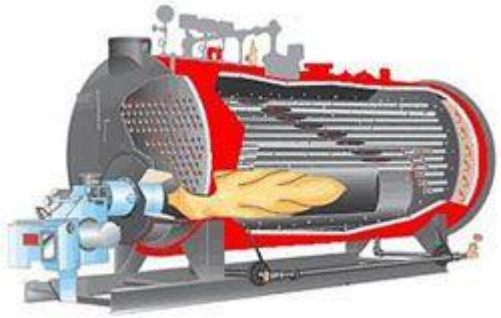
Push maximum feedstock carbon into a liquid



FPBO
(fast pyrolysis bio-oil)

Carbon backbone preserved in liquid for immediate use or subsequent conversion

COMMERCIAL ANCHOR PRODUCT



RENEWABLE FUEL OIL
(heating and cooling)

Enables large immediate growth in FPBO production capacity for application in developing products

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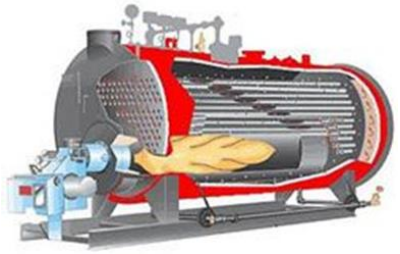
Anchor Product Enables Rapid Growth of New Products – Broad Platform

Renewable Chemicals (commercial)

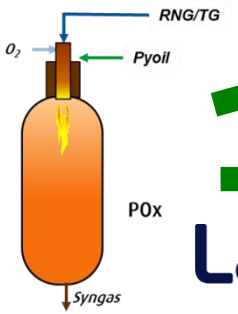
FPBO



Boiler Applications

Honeywell UOP

Refinery Coprocessing



Linde

LanzaTech

Hot Oxygen Gasification (syngas production)

ANCHOR PRODUCT

Renewable Fuel Oil (commercial)

NEW PRODUCTS

Renewable Gasoline

Renewable Diesel

Cellulosic Methanol

Renewable Hydrogen

Cellulosic Ethanol

Cellulosic Materials

SAF

Alliances

Feedstock & Production

suzano

ARBEC

Groupe Rémabec

CASTLEROCK GREEN ENERGY

Conversion

Honeywell UOP

Envergent TECHNOLOGIES A Honeywell Company

Marketable Products

Chemicals	Heating	Refinery Co-processing	Gasification
KERRY	PREFERRED UTILITIES MFG CORPORATION	Honeywell UOP NREL NATIONAL RENEWABLE ENERGY LABORATORY BR PETROBRAS	Linde LanzaTech

Ensyn emphasizes strategic alliances with global leaders across the value chain

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Long Commercial History

Current RTP Energy Production

“Survival is the key element for success in Bioenergy”

- ✓ Ensyn incorporated in 1984 – almost 40 years
- ✓ Continuous commercial production since 1989
- ✓ Eight commercial RTP units in operation in North America
- ✓ Over 80 years of unit operations
- ✓ Over 100M gallons of biocrude produced

Cote Nord, Quebec
10 M gpy
Operating 5 years

Renfrew, Ontario
3M gpy

Operating 17 Years

Rhinelander, Wisconsin
multiple units up to
1 M gpy
Oldest biomass unit
Operating 28 Years

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Heating Applications

- ✓ Ensyn's biocrude - a renewable, liquid fuel produced from solid biomass
- ✓ 30+ years experience of at Kerry's RTP operations in Wisconsin
- ✓ Wider commercialization now underway
- ✓ Memorial Hospital nearing 10 years of operation with 100% biocrude
- ✓ Used commercially or demonstrated at scale in a wide variety of thermal units - large institutional and commercial boilers, district energy plants, industrial boilers and furnaces
- ✓ A practical solution for large commercial and industrial entities to cost-effectively lower the carbon intensity of their thermal operations

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Other Energy Applications – Enormous Demand

Refinery Co-processing

- ✓ Co-processing biocrude in the FCC unit (Fluid Cracker)
- ✓ Multiple demonstrations in operating refineries worldwide
- ✓ Yields comparable to normal refinery operations
- ✓ Regulatory clarification is the key issue
- ✓ Ensyn - powerful competitive proprietary position
- ✓ Alliance with Honeywell UOP

Advanced Cellulosic Renewable Gasoline and Diesel in Existing Refinery Infrastructure

Honeywell UOP

Gasification/Synthesis Gas

- ✓ Production of key energy products from synthesis gas (syngas) via gasification of Ensyn biocrude
- ✓ Successful demonstration – proven technical pathway
- ✓ Ensyn alliance with Linde and LanzaTech to develop commercial cellulosic ethanol, cellulosic materials & SAF

Advanced Cellulosic Alcohols, Cellulosic Materials, SAF, Diesel and Hydrogen from FPBO Syngas

Linde LanzaTech

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Production Expansion Strategy

- ✓ Rapid expansion of FPBO production capacity driven by RFO markets
- ✓ Multiple heating oil projects under development in N. America and Brazil
- ✓ The design of scaled-up RTP plants is in progress: 2 to 4 x largest operating units
- ✓ Ensyn will leverage new production capacity to access broader commercial applications and products:
  - co-processing and gasification to produce cellulosic alcohols, renewable hydrogen, transportation fuels and SAF

Alliances for Project Development and Production

USA

- ✓ New alliance with CastleRock Green Energy (CGE) to develop and own production facilities in the USA

Brazil

- ✓ 50/50 joint venture with Suzano to develop and own production facilities in Brazil

Canada

- ✓ Development through subsidiary Vyterra and strategic partners

Europe

- ✓ Targeted negotiations in progress

CASTLEROCK GREEN ENERGY

suzano

Vyterra Renewables

Project Development For Expansion of Production Capacity

SITE/LOCATION	FEEDSTOCK		PRODUCTION CAPACITY	DESCRIPTION
	TYPE	INPUT		
Maine, USA	Forest Residuals	400 bdtpd	20M gpy (RTP20)	✓ Permitted ✓ Heating oil offtake ✓ CGE partnership
Nova Scotia, CAN	Mill & Forest Residuals	200 bdtpd	10M gpy (RTP20)	✓ Zone permitted ✓ Heating oil offtake ✓ Vyterra development
Espirito Santo, Brazil	Eucalyptus Residuals	100 bdtpd & 400 bdtpd	5M gpy (RTP5) 20M gpy (RTP20)	✓ Permitted with Suzano ✓ US Heating oil & other markets
MidWest/NW	Forest Residuals	400 bdtpd	20M gpy (RTP20)	✓ Under development ✓ Incl. H2, EtOH & SAF

Summary: Expansion of Production Capacity For Emerging Products

- ✓ Alliances with CastleRock Green Energy (CGE) will allow at least ***70 million gallons*** of production to come onstream over the next 2+ years, with additional projects to follow
- ✓ This new production capacity will initially service the "anchor" market - heating oil - but ***significant capacity can be migrated toward emerging markets***
- ✓ Ensyn is working with Linde and LanzaTech to quickly demonstrate the profitable production of emerging products – ***cellulosic EtOH, renewable H_2 and SAF***
- ✓ Newer projects include detailed design ***of scaled-up RTP projects*** with potential to enhance economics

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Vyterra Renewables

Linde

LanzaTech


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