



ENSYN

ABLC Next 2024

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RTP® – Scale-up & Commercial Deployment

ENSYN - 40+ years in business

RTP®

- Ensyn's core technology – a platform for multiple products
- Converts solid biomass to high yields of liquid biomass
- Fast thermal conversion - no pressure, H₂, or catalyst
- Scalable now to at least **20M** gpy (80M l/y) – economy of scale

RTP Production

- Continuous commercial production since **1989**
- **10** commercial RTP facilities commissioned
- **8** currently operating, **2** decommissioned after 20 yr & replaced
- Oldest of current RTP units operating since **1996**
- Additional **6** RTP demonstration and pilot units for testing



*Renfrew, Ontario, 3M gpy
commissioned 2006*

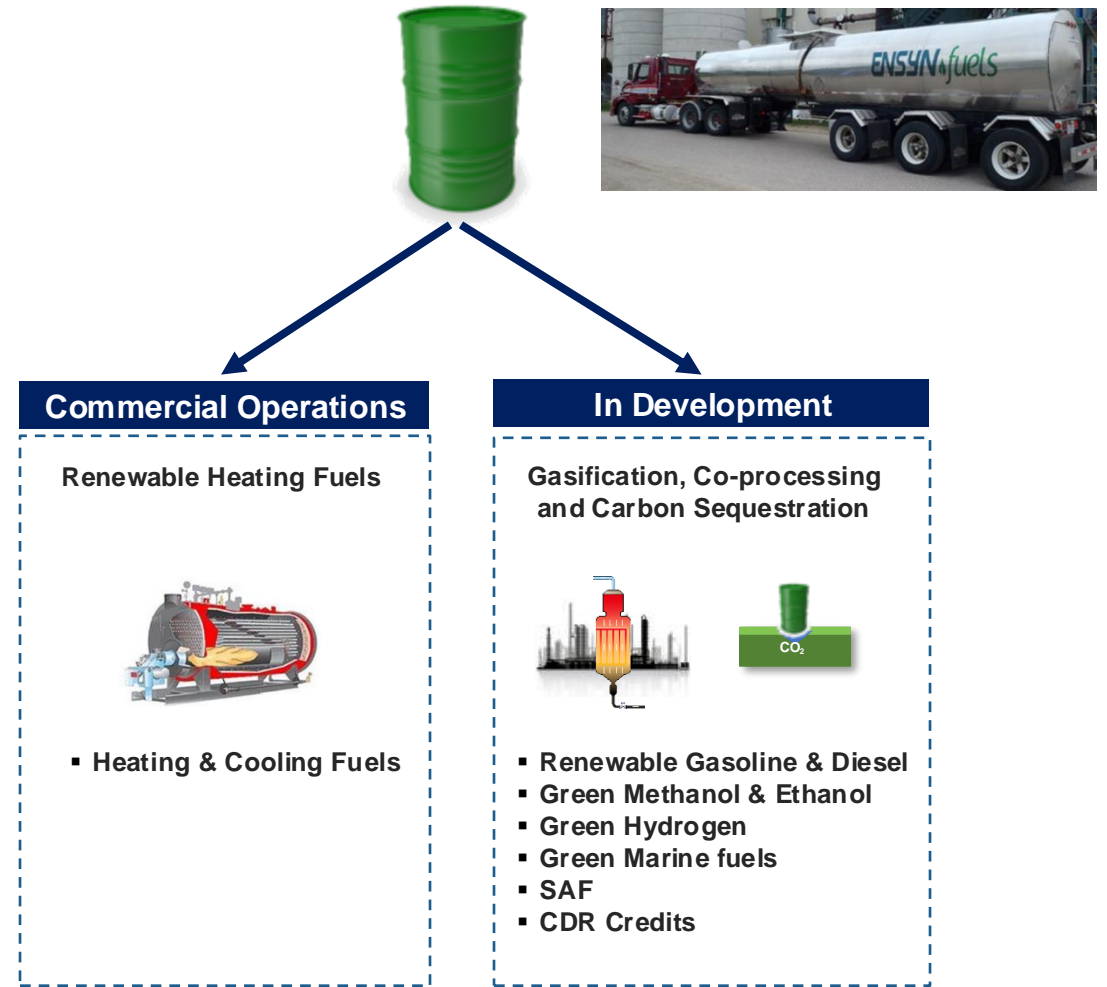


*Cote Nord, Quebec, 10M gpy
commissioned 2018*

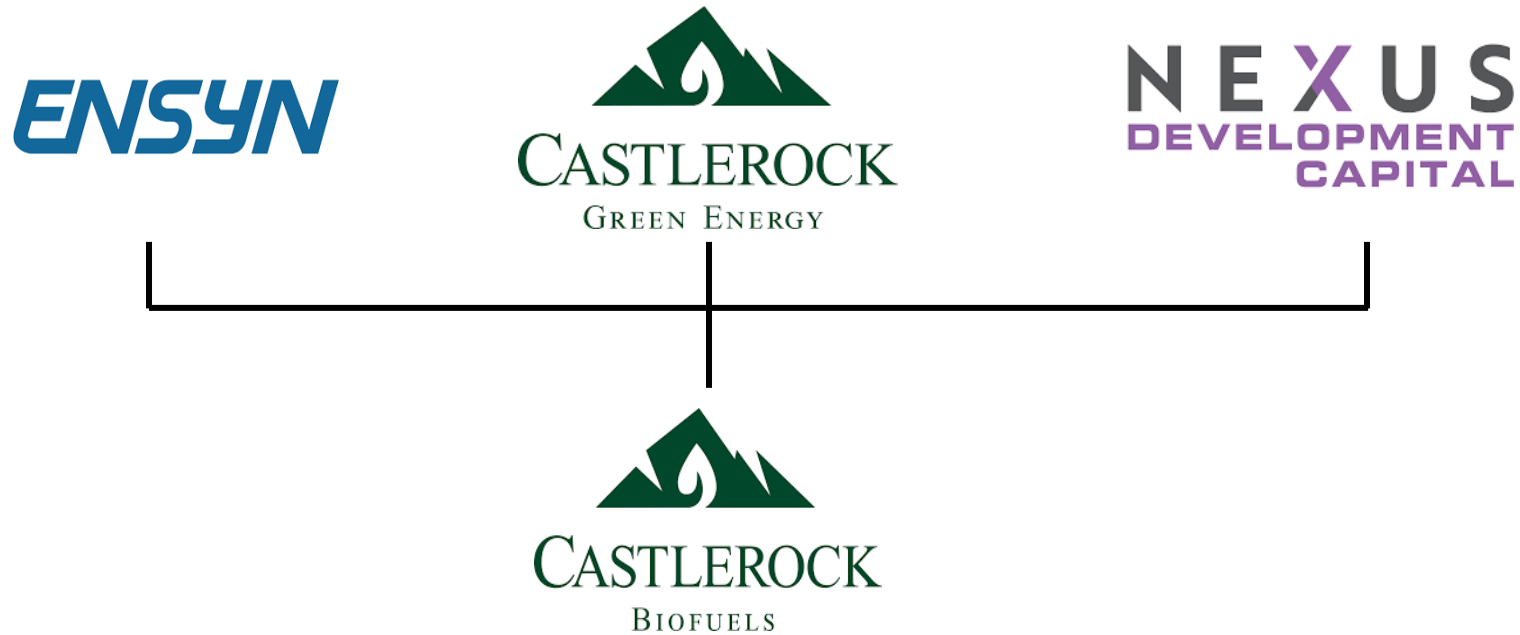
RTP Products

- Initial commercial products
 - Food ingredients & chemicals
 - Process Heat
 - Continuous production since 1989
- Initial energy product and projects:
 - **Heating fuels**
 - Anchor product for initial energy projects
 - Capacity expansion to seed growth products
 - Commercial operations since 2014
- Growth products - a platform technology
 - Renewable Gasoline & Diesel
 - Green Methanol & Ethanol
 - Green Hydrogen
 - Green Marine fuels
 - SAF
 - Carbon sequestration (CDR Credits)

Ensyn's FPBO (fast pyrolysis biooil)



New Alliance for US Production Development



- Alliance established to develop production plants in the US
- **Castlerock:** Experienced energy infrastructure developers
- **NDC:** Provides capital & expertise to developers of sustainable infrastructure projects

Initial Energy/Heating Fuel Projects

US Project – Millinocket, Maine

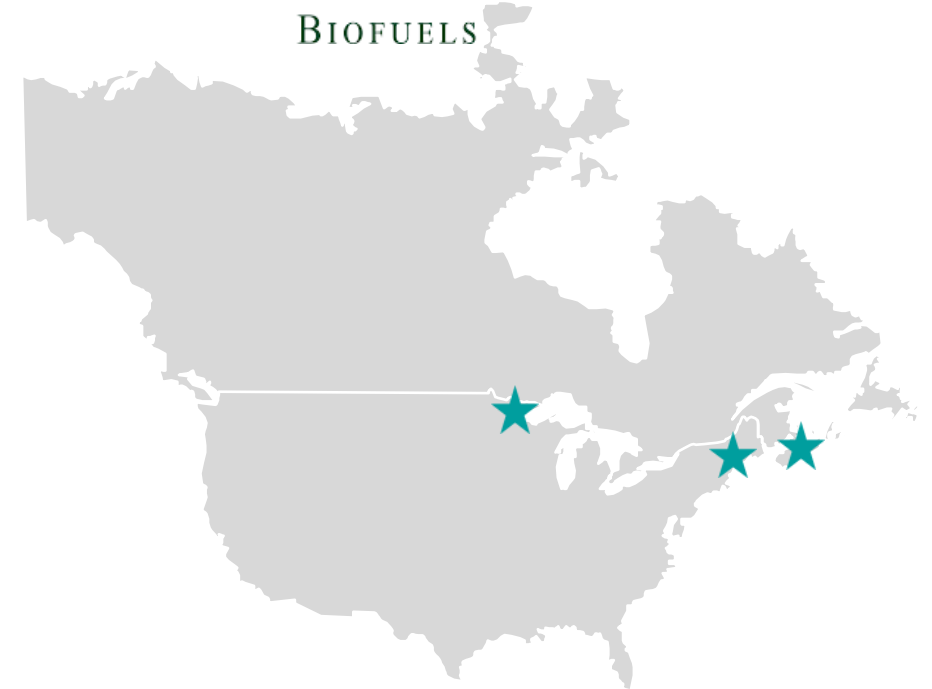
- Castlerock Biofuels first US project
- 20M gpy RFO heating fuel
- US\$ 9 million development capital financing agreement with Nexus Development Capital
- Engineering underway

Canadian Project – Enfield, Nova Scotia

- 10M gpy heating fuel
- Co-located with Ledwidge Lumber mill
- Offtake based on Michelin combustion demo

US Project – Hoyt Lakes, Minnesota

- MN Department of Economic Development
- 20M gpy heating fuel (plus 5M gpy chemicals)
- Hoyt Lakes / Iron Range Resources (IRRRB) / MN Power



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Additional Growth - FPBO Capacity Expansion Pathways

- Project expansion planned for MN, WA and WI
- Anchored on de-risked heating fuel projects
- Additional production expansion to leverage production of FPBO for *growth products*

- **FCC Coprocessing**

- Renewable gasoline & diesel
- 10+ years of successful commercial trials
- Regulatory framework evolving in a positive direction

- **Gasification**

- Working with Linde
- Green methanol and ethanol
- Green hydrogen
- Marine fuels
- SAF

- **Carbon sequestration**

- RTP liquids downhole injection in commercial use
- Generating CDR credits



★ **Growth Targets**



Final Thoughts on Advanced Biofuel Industry-Wide Considerations

- To reach the volume targets for advanced biofuels, particularly SAF, but also transportation fuels (gasoline and diesel)
 - Qualified cellulosic feedstock consensus and clarity
 - Economic/pricing clarity
- Regulatory Clarity for Co-processing

