

September 2022



ENERKEM INTRODUCTION

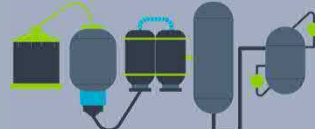




WHO WE ARE




200+ specialized employees

Thermochemical technology patented



World-class strategic partners



Commercial facility in service



Advanced biofuels and renewable chemicals at competitive costs



Smart waste management solution, detour from landfill and incineration

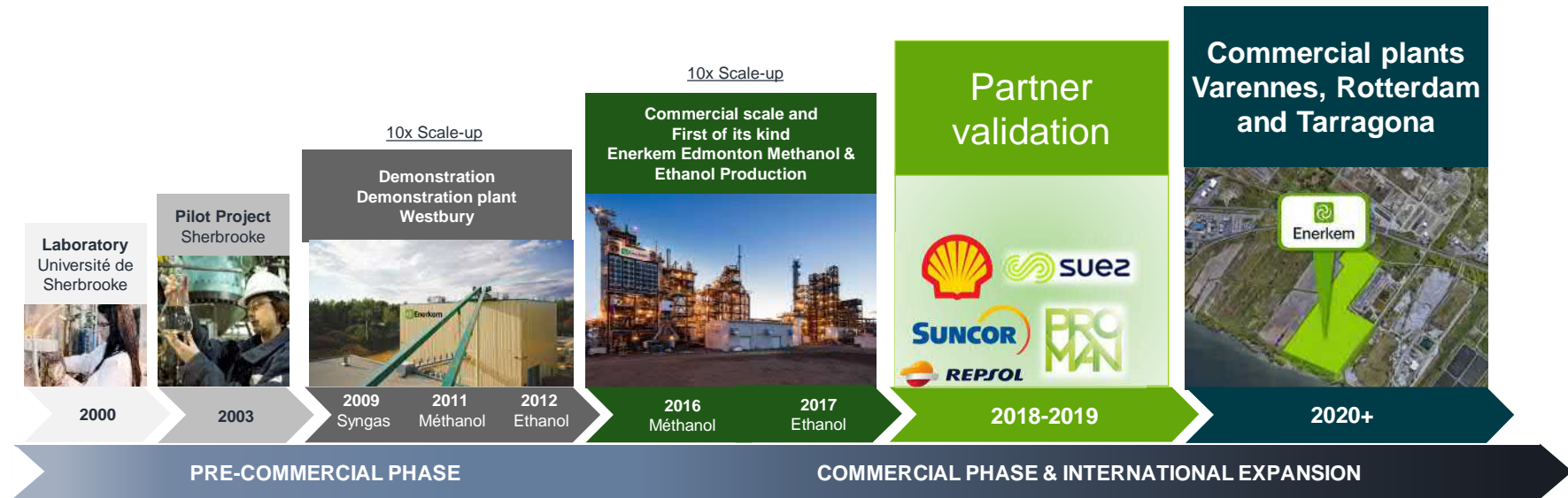


Scalable technology carefully vetted by partners



TECHNOLOGICAL AND INDUSTRIAL SCALE-UP ROADMAP

Through a rigorous approach

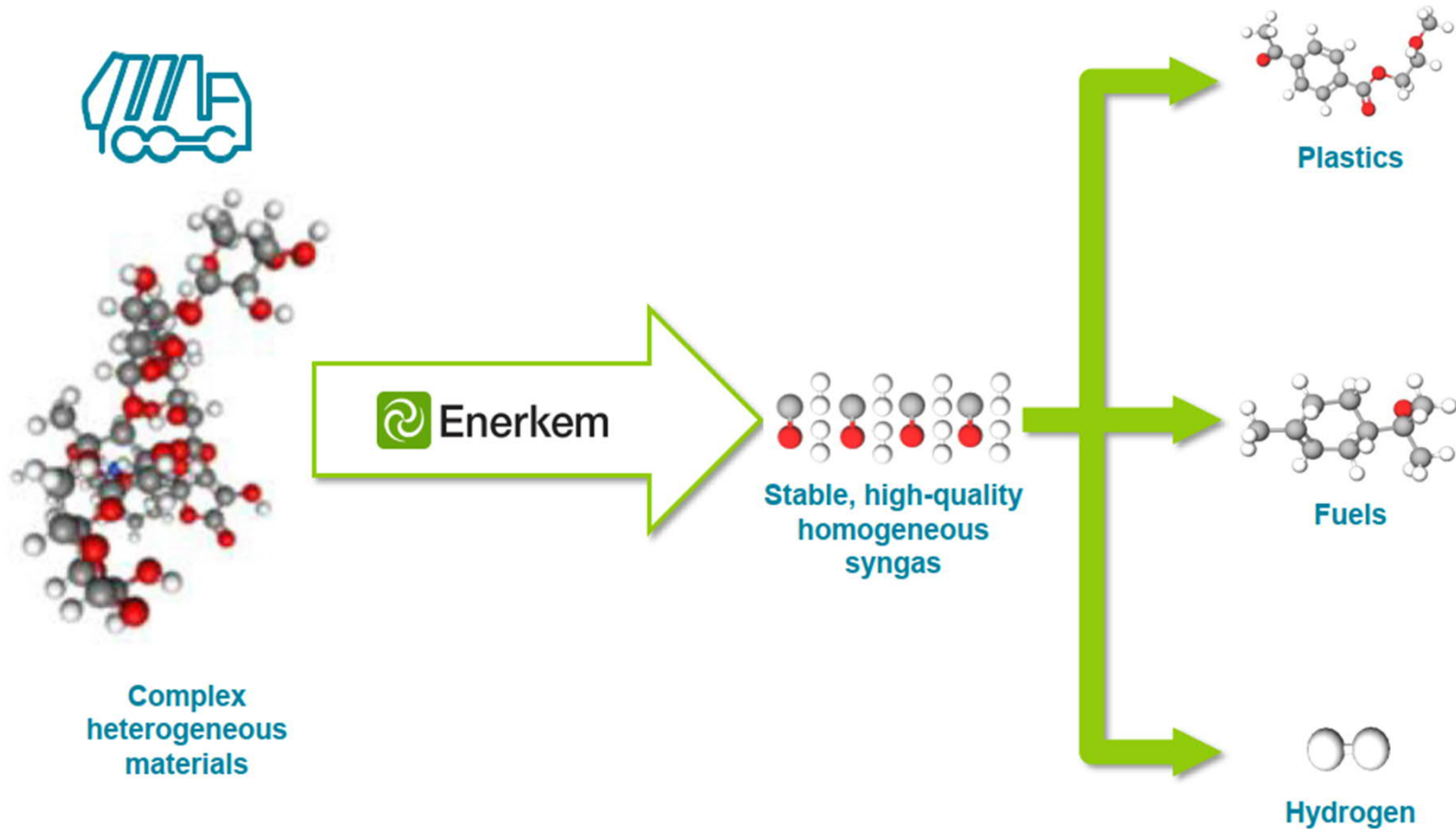


The only proven and validated process for converting waste into syngas, bio & circular methanol and ethanol on a commercial scale (Edmonton)

- ✓ Feedstock Flexibility: Proven ability to produce clean, stable syngas from a wide range of feedstocks
- ✓ Municipal, industrial and commercial solid waste, residual biomass and plastics.
- ✓ IMPCA Quality Methanol and Ethanol
- ✓ Achieved ISCC certification in 2015 for processing low-CI methanol into chemicals.

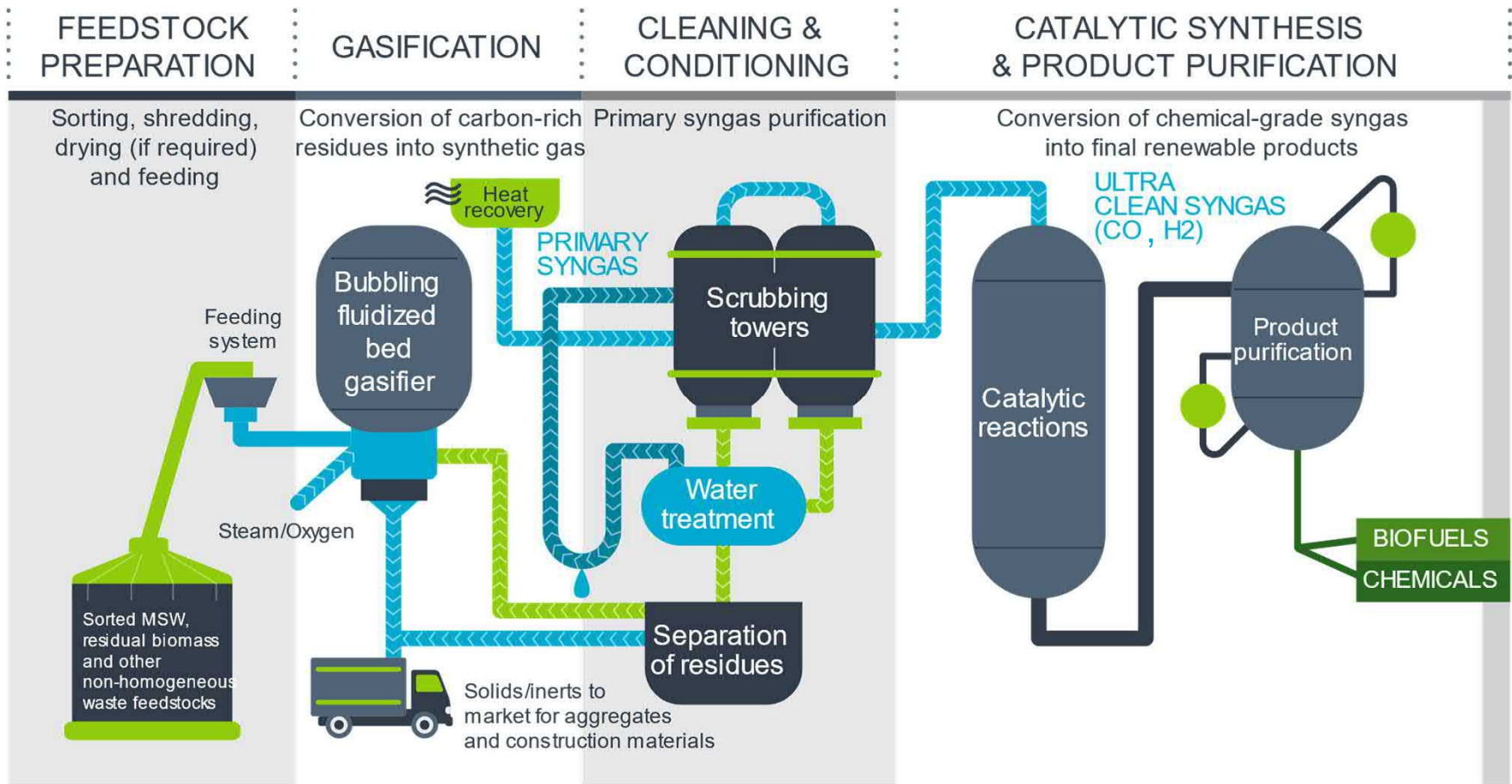


WASTE VALORIZATION THRU ULTRA-CLEAN SYNGAS





'CARBON RECYCLING' PROCESS



ENERKEM'S TECHNOLOGY ALLOWS FOR FEEDSTOCK FLEXIBILITY

Adaptability

Feedstock flexibility enables optimization of:

- ❑ Local waste market / Tipping fees
- ❑ Biogenicity / Carbon recycling
- ❑ Biofuels targeted market applicable regulations (RFS, LCFS, RED II)
- ❑ Biofuels Carbon Intensity (CI)
- ❑ MSW, MRF & MBT residues and Biomass can be easily transformed into Biofuel or Chemicals with minimal refinement needed

The selected feedstock mix will have an impact on:

- ❑ Feedstock throughput (Quantity of RDF processed / year)
- ❑ Product yield (Tons per BDMT of feedstock)
- ❑ Realized product prices

Feedstock Track Record

More than 25 feedstocks tested successfully in the process

<p>MSW (Toronto, Sherbrooke, London (UK) and Edmonton)</p> 	<p>Forest biomass (as well as treated wood and C&D wood, both pelletized and chipped)</p> 	<p>Biosolids (dried, from Montreal and from pulp & paper operation)</p> 
<p>Agriculture biomass (wheat straw, corn stovers)</p> 	<p>Plastics (various forms: pelletized, shredded, fluffed and mixed)</p> 	<p>Glycerin</p>  <p>Petcoke (Alberta, with 8% humidity and 5-6% sulfur)</p> 

Enerkem can use various levers in order to optimize feedstock strategy / project profitability



PART OF AN INTEGRATED WASTE MANAGEMENT SOLUTION

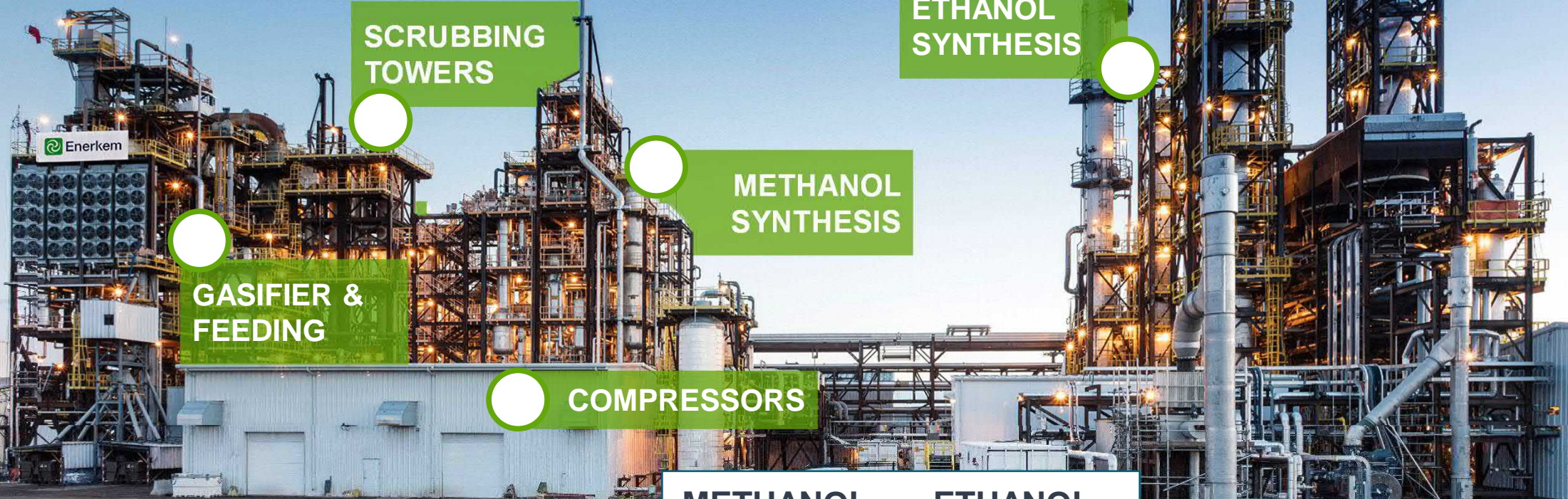
1 WASTE PRE-TREATMENT

2 RECYCLING CENTER

3 COMPOSTING CENTER

4 ENERKEM BIOREFINERY





SCRUBBING TOWERS

ETHANOL SYNTHESIS

METHANOL SYNTHESIS

GASIFIER & FEEDING

COMPRESSORS

METHANOL 2015-2017	ETHANOL 2017-2020





**ADVANCED ENERGY
RESEARCH FACILITY**
Edmonton, Alberta, Canada



**DEMONSTRATION &
INNOVATION CENTER**
Westbury, Quebec, Canada



PILOT FACILITY
Westbury, Quebec, Canada

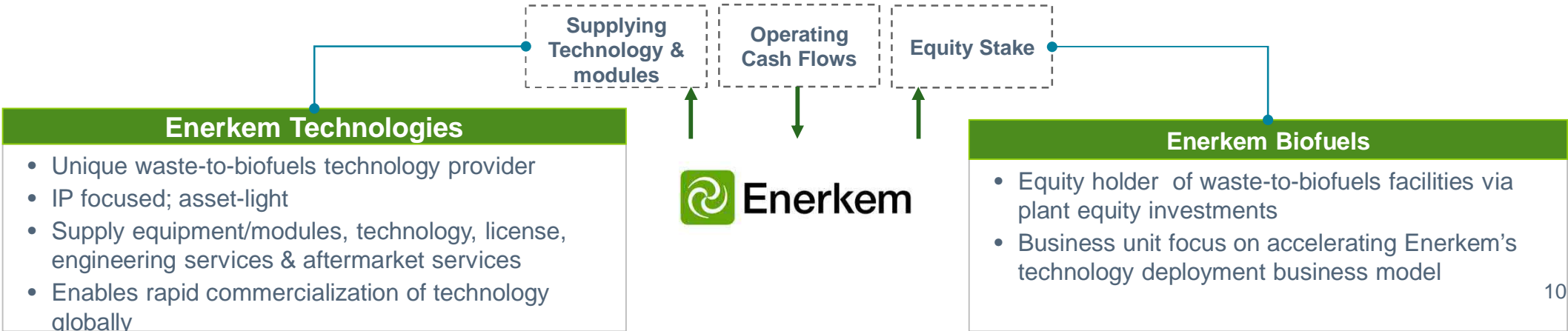


FEEDSTOCK TESTING
Westbury and Edmonton



BUSINESS MODEL: FOCUS ON TECHNOLOGY DEPLOYMENT

- The Company has structured its business model along two streams to allow acceleration of commercial deployment
 - **Enerkem Technologies** to supply equipment/modules & technology
 - **Enerkem Biofuels** to participate in plant equity; capturing cash flows during the operating phase of the facilities





NEAR TERM PROJECTS ROLLOUT STRATEGIC PARTNERS





VCR | Varennes Carbon Recycling

VARENNES CARBON RECYCLING (VCR)

Capacity: 125 million litres of MeOH per year
(1x standard Enerkem system with H2 import)
includes 87 Mwe electrolyser supplying H2 and O2

Feedstock: 200,000 dry tonnes of non-recyclable waste

Other benefits: 500 jobs during construction
100 permanent direct skilled operational roles
CAD \$85m of annual benefits for Québec



Puigdelfí



ECOPLANTA EL MORELL

- Type:** Commercial facility with two production lines
- Input:** ~360,000 metric tons of waste materials per year (2x standard Enerkem)
- Feedstock:** Non-recyclable waste from the municipal, industrial, commercial and institutional sectors
- Benefits:** over 65% reduction in GHG emissions vs. incumbent technologies
- Output:** 270 million liters per year
- Products:** Biofuel & Circular Methanol
- Status:** Permit application process completed, FID Q4 2022



WASTE-TO-JET ROTTERDAM

Type:	Commercial facility with two production lines
Input:	~360,000 metric tons per year (2x standard Enerkem system)
Feedstock:	reject fractions from waste recycling plants
Benefits:	70% reduction in GHG emissions
Output:	Up to 80,000 tons of renewable products
Product:	Sustainable Aviation Fuel (75%), Naphtha





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