

CARBOVATE DEVELOPMENT CORP.

Carbon Materials Solutions Through Advanced Process Technologies



Driving the future of environmentally friendly asphalt binder production for better roads

WHO WE ARE

A PROCESS TECHNOLOGY INNOVATOR COMMERCIALIZING VALUE-ADDED PRODUCTS FROM BITUMEN RESOURCES

Extensive Refining, Process, R&D, Plant Operations, Environmental and Financial expertise



US Patent awarded 2022



11274255

OUR MISSION

Through Innovative Patented Technology

Cost effectively leverage Canadian resources to develop low emission high quality asphalt binder for better long life roads and other industrial products



ASPHALT FIRST THE CHALLENGE

The Current Challenges with much of Asphalt production today;

Complex Refining Processes

Production Emissions

Variable Feedstocks

Lack of Consistency

Shortened Road Longevity



ASPHALT FIRST TECHNOLOGY BY DESIGN

***Reverse the current industry process,
The CARBOVATOR™ Platform***

Produce a premium asphalt binder as the primary product

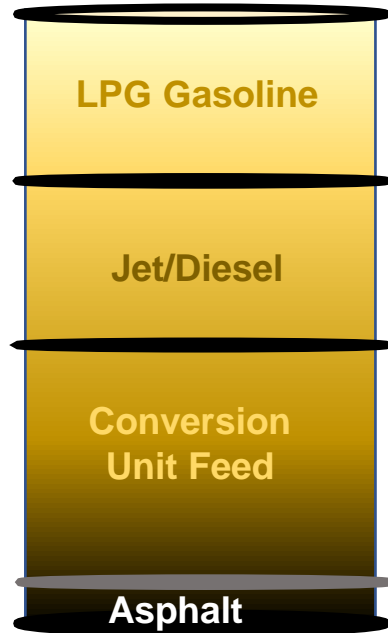
CARBOVATE Analysis;

Improved product margins, Virtually eliminates Scope 1 GHG emissions,
Creates jobs, Extends road life, Increases productivity, Frees up tax dollars,
Generates new markets for the feed resource other than fuels production



ASPHALT FIRST CARBOVATE SRP PROCESS

Traditional Refining

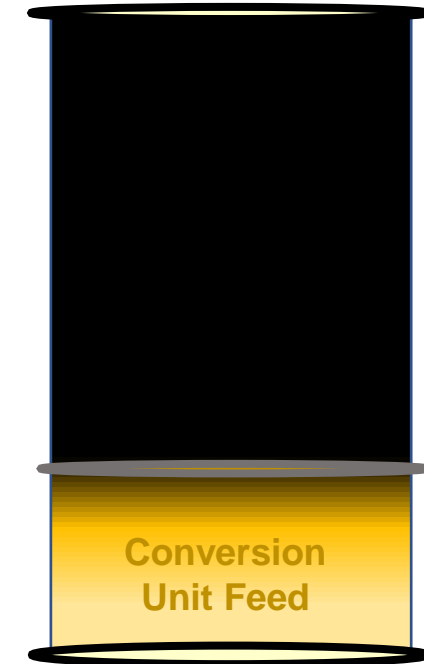


< 15% Asphalt
Standard
Emissions

CARBOVATE SRP Changing Traditional Processing

- Feedstock direct to PG Grade Premium Asphalt
- Polymer blending not required
- Consistency of product through feedstock supply management

CARBOVATE SRP

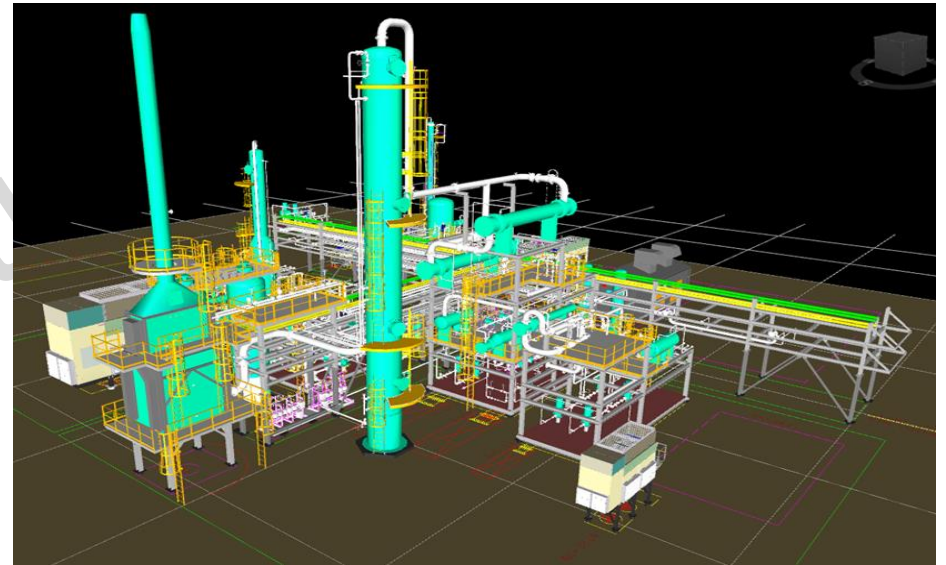


> 70% Asphalt
Near Zero
Emissions

ASHPALT FIRST ENABLEMENT BENEFITS

Overall Reduced Carbon Footprint Enables Circular Production

Less energy consumption, Fewer Emissions
Virtually no water use, no boiler, no desalter
Modular construction enables low capital cost
Small footprint, 50 M x 50 M
No Flare



CARBOVATE Technology offers a range of Environmental Benefits that will help create a more sustainable future for asphalt binder production

CARBOVATE BEYOND ASPHALT

Traditional Flares

Have emissions
Require pilot and maintenance
Disruptive to neighbors

We can help!



CARBOVATE BEYOND ASPHALT

Imagine passively capturing,
storing and recycling release event
material?

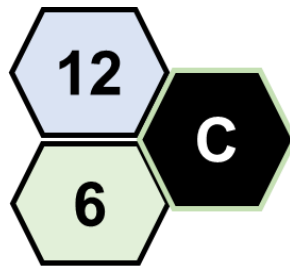
Imagine maintenance
shutdowns?

Augment flare load, Protect specific units

Patent being prosecuted
Class 4 designs completed
Soon looking for process demonstration partner and site



RE-THINKING BITUMEN RESOURCES



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