



Parkland
FUEL CORPORATION

**Burnaby Coprocessing
Opportunity
CAP**

May 16, 2018



Climate Change Policy Backdrop

- Climate policies are fluid with aggressive federal plans overlapping provincial programmes to meet Paris Accord commitments
- Federal Clean Fuel Standard to be incremental to existing Provincial rules
- Two elements: carbon pricing and complementary low carbon policies
- BC Carbon tax policy not competitive with Alberta for refining
- BC reviewing BC Low Carbon Fuel Requirements to 2030
- Compliance pathways are not clear. Global shortage of renewables with low carbon intensity particularly HDRD
- **The Burnaby Refinery is uniquely positioned to evolve our production to succeed in this policy environment**



Refinery Policy Issues

- Compliance and success under low carbon environment
- Overlap of Federal and Provincial (e.g. BC LCFR/CFS)
- Cumulative impacts of policy (climate and emissions)
- Pacing considerations
- EITE (Energy Intensive Trade Exposure) challenges
- Capital planning challenged by policy stability
- Policy timelines vs. political cycle
- Market implications of interjurisdictional GHG policies



Coprocessing Trials

- First trial successful at commercial scale with significant learnings
- Canola into process unit at 10 % in May 2017
- At scale feedstocks currently limited to canola and tallow
- Next trial planned for September 2018
- Building understanding downstream impacts to equipment, yields and economic impacts,
- Feedstock challenges:
 - Volumes at viable economics
 - Suitable chemical and physical characteristics
 - Low carbon Intensity
 - Reliable supply chains



Co-Processing Path Forward

Commercialization Feedstocks: canola, tallow

2nd Generation Feedstocks potential: drop in fuels from wood waste, HTL

(seeking feedstock scale, low CI)

Understand
Co-
Processing
Technology

Implement
Technology
to Generate
Credits &
RD/RG/Jet

Utilize credits

Generate credits,
Generate technical know how

Produce renewable diesel,
biojet & gasoline

Optimize LCFR
strategy to sell
excess credits