

# Enbridge System and Commodity Consolidation



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# Forward Looking Statements



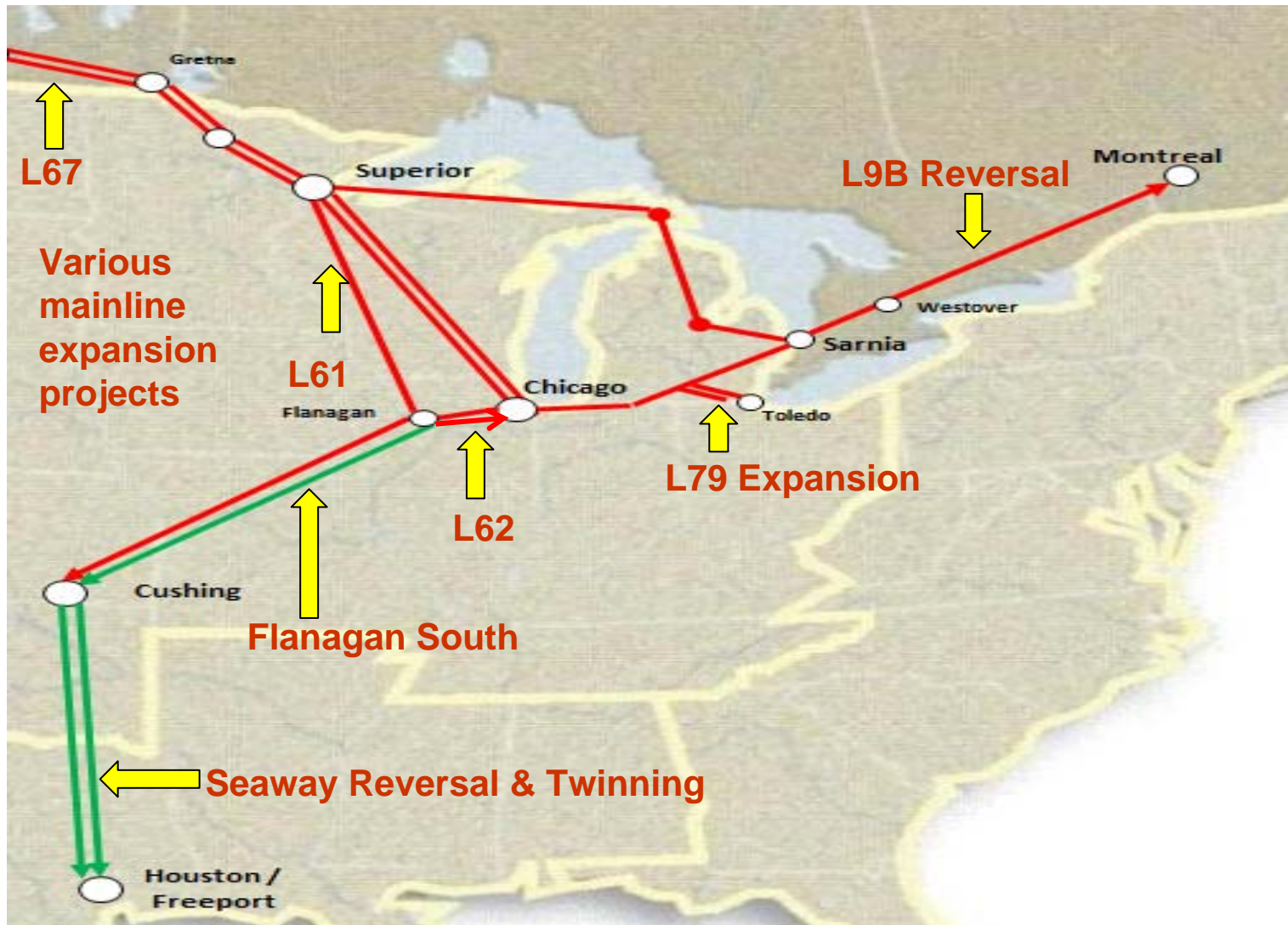
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# Enbridge Liquids System





# Enbridge Expansion Projects



# Crude Commodities



Group	ID	Crude Name	Group	ID	Crude Name			
Heavy	AHS	Albian Heavy Synthetic	Medium	M	Midale Blend			
	ARB	Albian Resid Blend						
	BR	Bow River	High Sour	MJT SHE SO	Moose Jaw Tops Sour Heavy Edmonton Mixed Blend Sour			
	CL	Cold Lake						
	F	Fosterton						
	LLB	Lloydminster Hardisty	Light Sour	LSB BSO SLE	Light Sour Blend BP Caven Sweet/Sour Sour Light Edmonton			
	LLK	Lloydminster Kerrobert						
	SC	Smiley Coleville Heavy						
	WCB	Western Canadian Blend	Sweet	SW UHC	Mixed Blend Sweet U.S. Sweet			
	WCS	Western Canadian Select						
WH	Wabasca Heavy	Light Synthetic	CNS HSB NSA *OSA OSC PAS *PSC SPX SSX *SYN	CNRL Synthetic Blend Husky Synthetic Blend Newgrade Synthetic Blend Suncor-A Suncor-C Premium Albian Synthetic Long Lake Synthetic Blend Shell Synthetic Shell Synthetic Light Syncrude				
Heavy Low Resid	AVB *OSH				Albian Vacuum Gas Oil Blend Suncor – H			
Heavy – High TAN Dil-Bit	AMH				Albian Muskeg River Heavy			
	AWB				Access Heavy Blend			
	*BHB				Borealis Heavy Blend			
	*CDB				Cenovus Christina Lake Dil-Bit			
	PH				Peace Heavy			
	*SCB SH				Statoil Cheecham Blend Seal Heavy			
Heavy – High TAN Syn-bit	*CSB				Christina Lake Syn-Bit	Condensate	CRW *OSN	Condensate Blend Suncor - N
	*MKH				MacKay River Heavy			
	*PSH	Long Lake Heavy Blend	Caroline Condensate	CCA	Caroline Condensate			
	*SHB	Surmont Heavy Blend						
Cracked Crude	*OCC	Suncor Cracked C	Sarnia Special	SSS	Sarnia Special Blend			
	OSJ	Suncor - J						
	*OSS	Suncor – S						
	PBS	Pine Bend Special						

\* Commodity moves on Athabasca System

# Enbridge Commodity Types (Enbridge.com & crudemonitor.ca)



	API	%S	MCR	TAN
Heavy	19-21	2.6-4.5	8.5-11.3	0.5-1.05
Heavy Hi Tan	19-21	3.0-4.5	7.5-10	1.4-3.5
Heavy Lo Resid	20	3.0	<1.0	3.5
Medium	30-35	2.5	6.0	0.2
Sour	30-35	1.1-1.8	4.0-6.0	0.3
Sweet	40	<0.5	2.0	0.2
Lt Sweet Synthetic	30-35	0.1-0.25	<0.5	0.1
Condensate	60	0.2	-	-
Olefinic				
NGL				
Refined Products				

# System Scenario

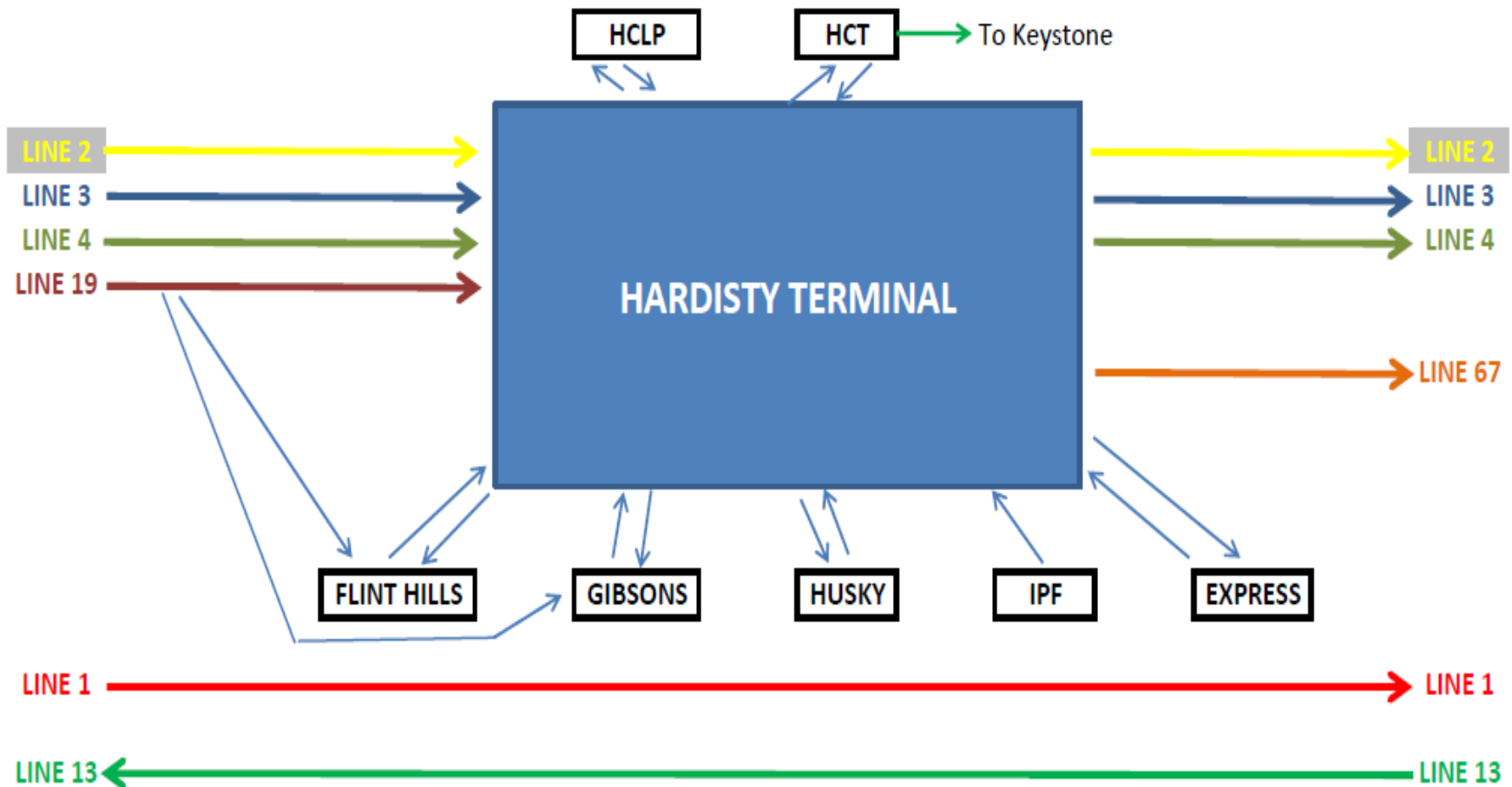


- Enbridge footprint growing – south & east
- Production growth challenging system capacity
- Presently 176 receipt & delivery points at 70 locations with 54 crude commodities – scheduling & operating challenges
- Multiple receipt/delivery points require clockwork timing (Hardisty example). Any supply or delivery issue puts system in sub-optimal format
- **Terminal Facilities Reality**
  - Superior has 35 tanks with full breakout
  - Griffiths/Hartsdale has 20 – again full breakout
  - Sarnia has 14 tanks – with full breakout
  - Building new tanks and terminal modifications
  - Some locations constrained by land, environmental regs etc
- **Bottom line: system getting full; number of commodities growing; scheduling and operational complexity growing; facilities challenged; operational issues at growing delivery points causing immediate & cascading capacity impact**

# Hardisty Terminal



Hardisty Terminal Flow Diagram





# Commodity Consolidation



- **One option Enbridge is exploring with its Shippers is to consolidate commodities in a very structured manner – pools with EQ**
- **Slide 5 in simplest terms can be collapsed 10 pools including unique commodities**
- **At very early stage of discussions with shippers**