

## **Liquids Pipelines**

**Guy Jarvis President, Liquids Pipelines** 



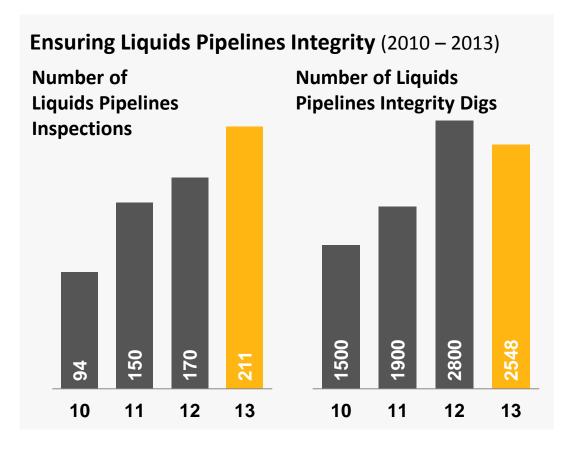
## **Key Messages**

- Fundamentals continue to drive growth
- Focused on project integration and asset optimization
- Excellent progress on market access strategy
- Extensive cost effective expansion opportunities

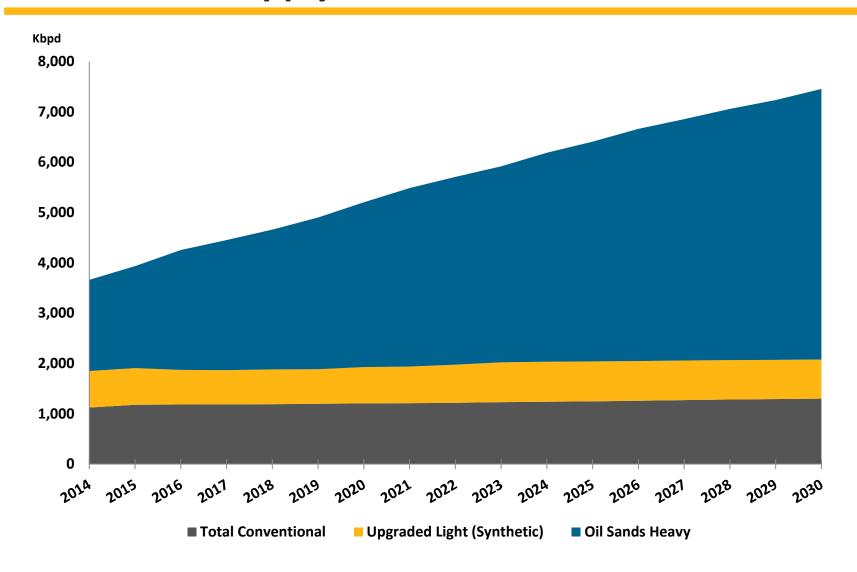
## **Safety and Operational Reliability**

Over the past 10 years, we've transported 14 billion barrels, with a safe delivery record of 99.9993%

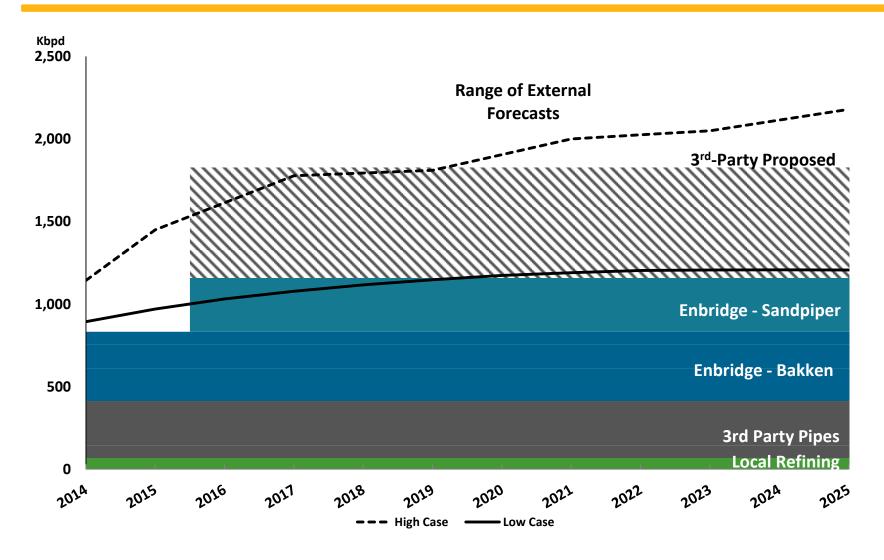
Our goal is
100 per cent safe
operations and
zero incidents and
we continually
strive towards
that objective



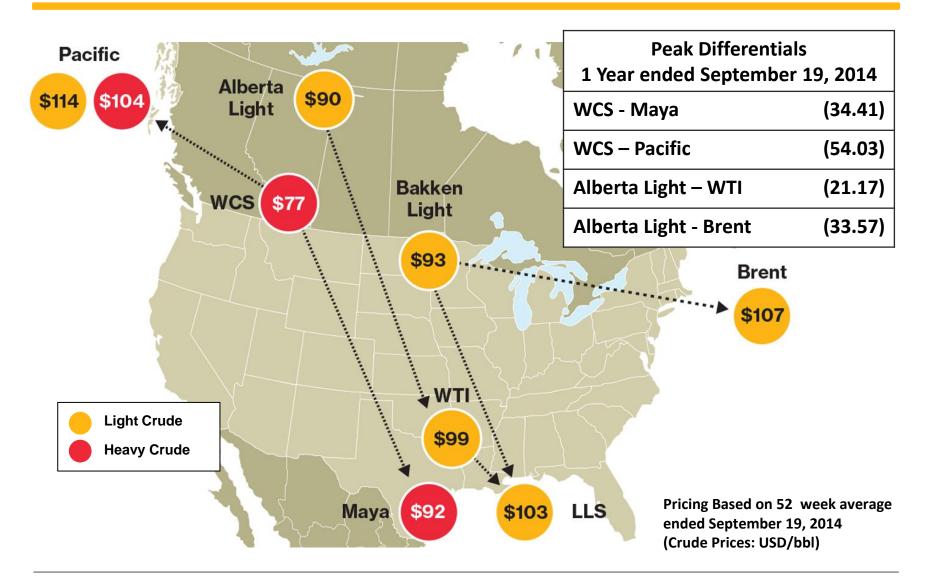
### **WCSB Crude Supply**



#### **Bakken Crude Supply and Pipeline Takeaway Capacity**

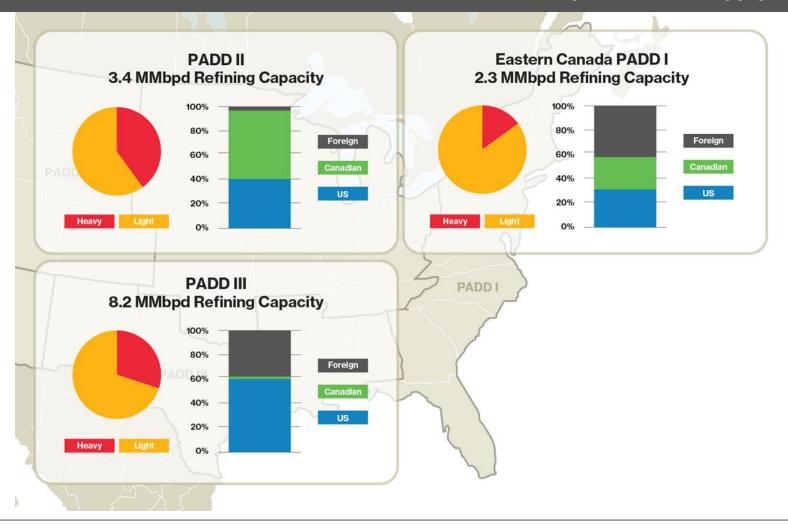


## **North American Pricing Differentials**



## **ENB Target Markets**

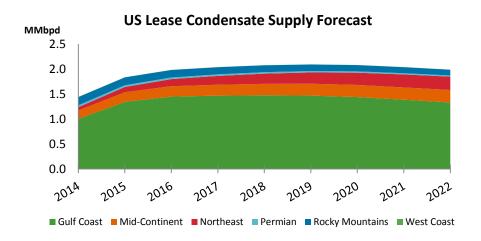
#### PADD III, Eastern Canada & PADD I hold the bulk of displaceable oil supply



## **US Condensate Supplies WCSB Demand**

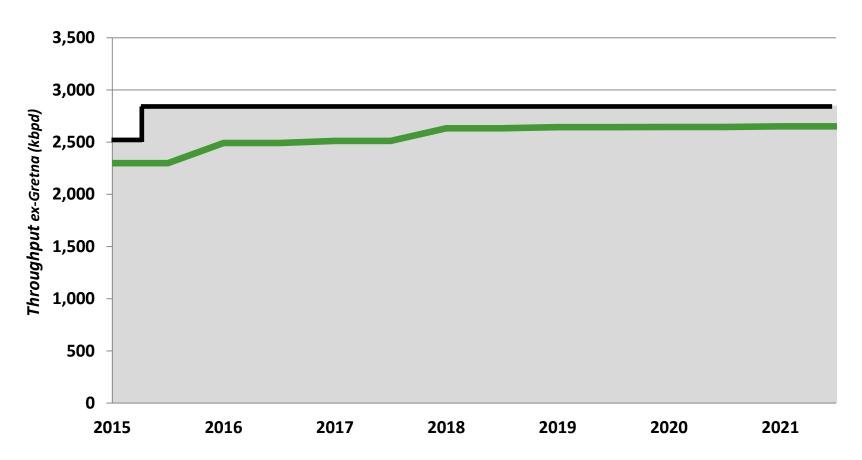


 Canadian diluent demand growth remains strong as production continues to increase



 US policy allowing processed/stabilized condensate exports to international markets

## **Net Available Supply to Enbridge**



Net available supply to Enbridge assumes Keystone XL, Energy East and one West Coast Pipeline are built.

**Design capacity** reflects Alberta Clipper Expansions in service during 2015.

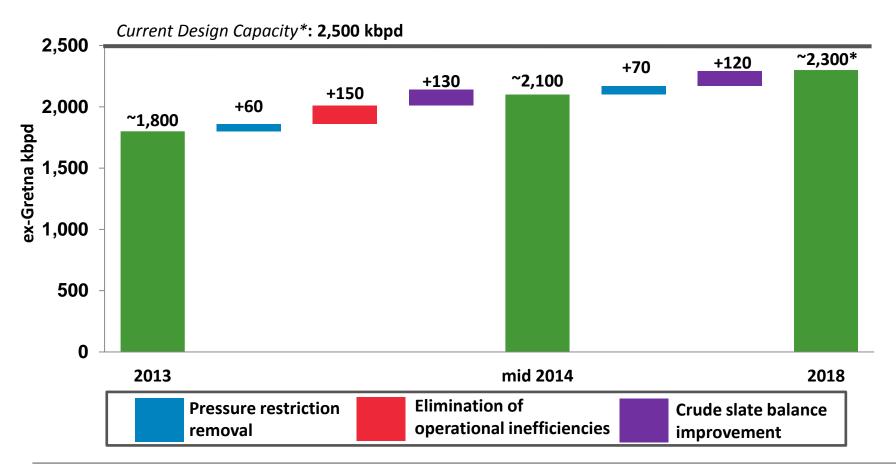
#### **Mainline Capacity Optimization – Capacity Erosion Sources**

# Maximizing available capacity enhances customer value and contributes to CTS earnings

Sources of ex-Gretna capacity erosion in 2013	kbpd
Temporary pressure restrictions	~130
<ul><li>Operational inefficiencies:</li><li>Commodity pooling/terminal optimization</li><li>Scheduling management/non-performance penalties</li></ul>	~150
Heavy maintenance/expansion program • Schedule coordination	Episodic
Light/Heavy crude slate versus line allocations	~400
Upstream/downstream bottlenecks	~40
	~700

#### Mainline Capacity Optimization – Current Status/Outlook

## Optimization efforts are closing the gap between available capacity and design hydraulic capacity



<sup>\*</sup> Excludes Alberta Clipper Expansions

#### **Mainline Capacity Optimization – Temporary System Optimization**

# Temporary actions are in place to squeeze out additional available capacity

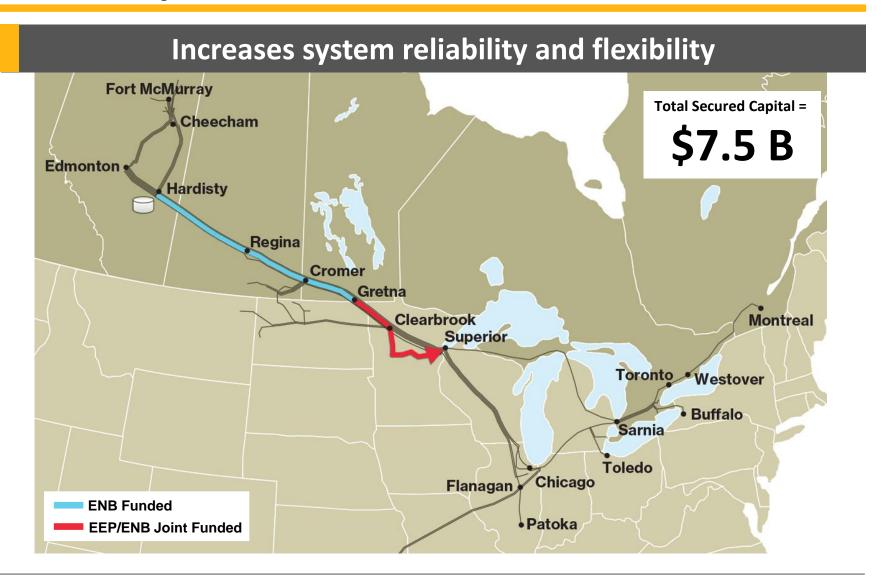
Drag reducing agent	~45 kbpd
Temporary crude slate reallocation	~40 kbpd
Interline flexibility connections	as required
Overall potential, if required	~100+ kbpd

### **Edmonton to Hardisty**

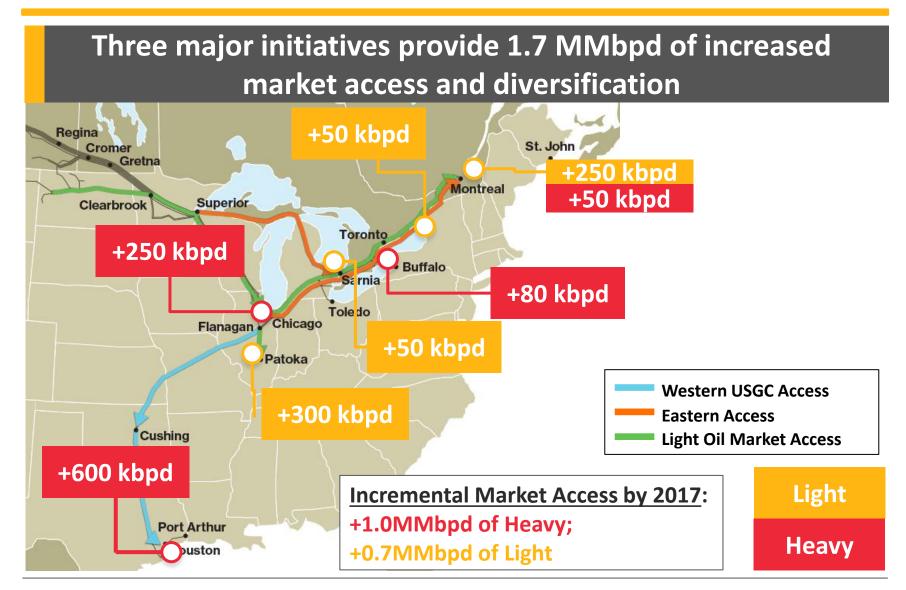


- 36" 180 km Pipeline
  - Edmonton to Hardisty
  - 800 kbpd capacity
- Edmonton South Terminal
  - Terminal facilities
  - 3 transfer laterals
  - 5 550 kbbl tanks
- In Service 2015

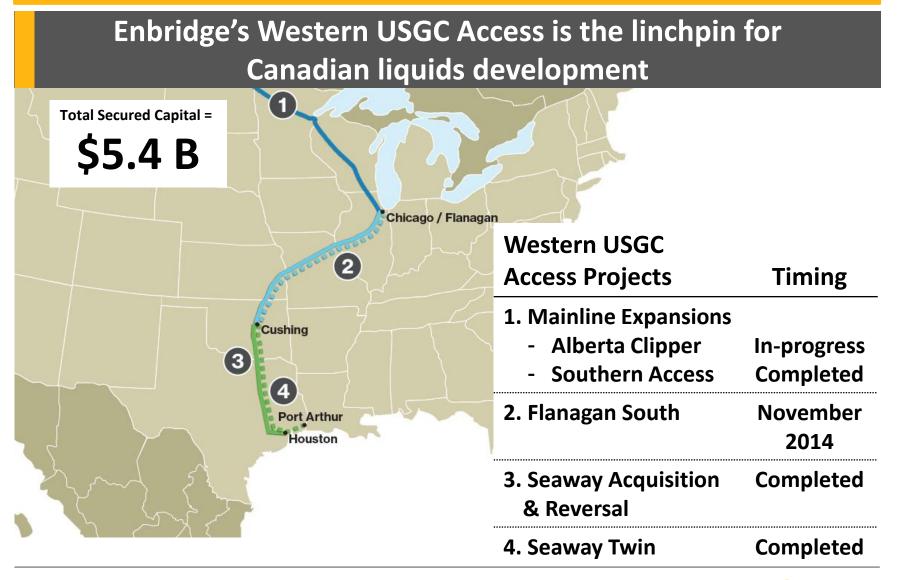
## **Line 3 Replacement**



#### **Market Access Well Advanced**

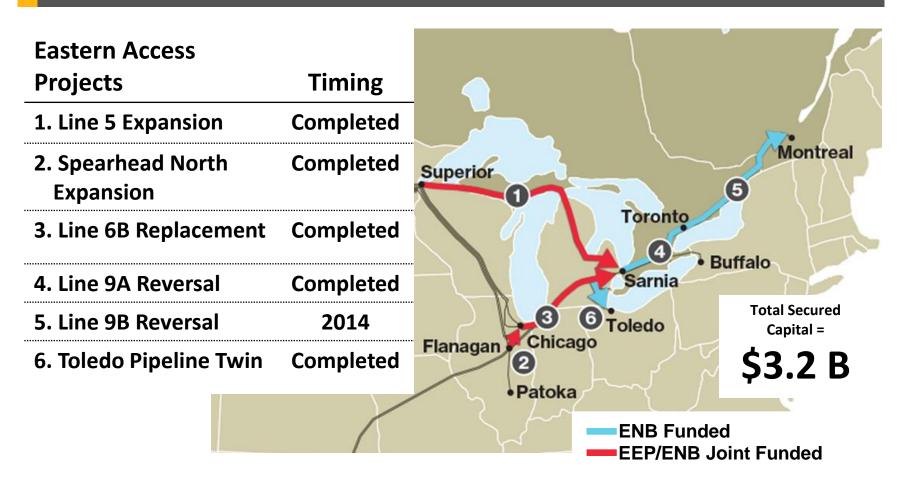


#### Market Access – Western USGC Access



#### Market Access – Eastern Access

#### Enhances security of supply and refinery competitiveness



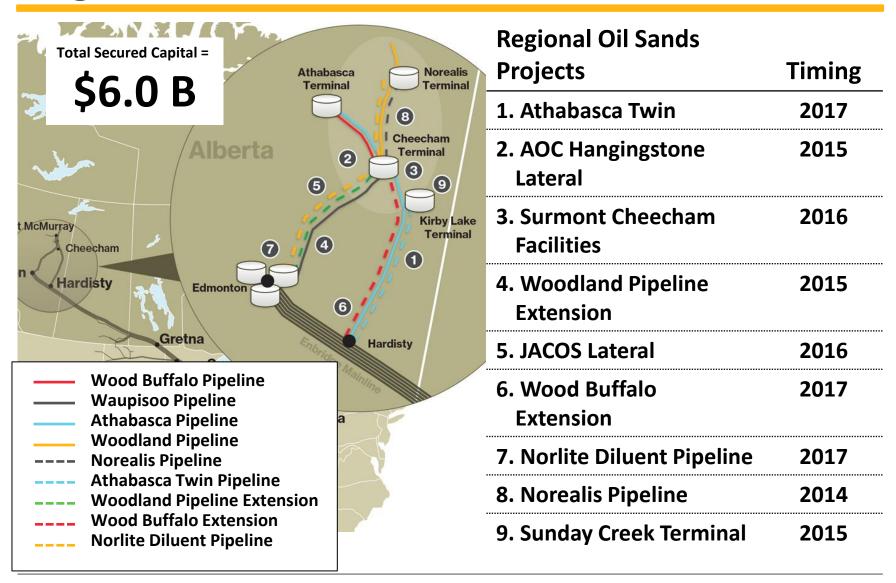
## Market Access – Light Oil Market Access

Competitive transportation cost to multiple markets for Canadian light oil and Bakken producers relative to differentials

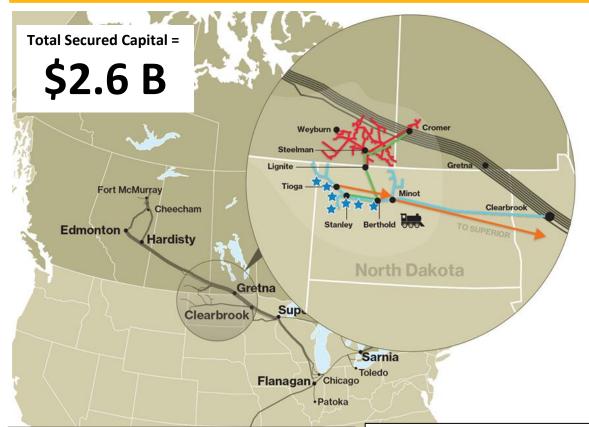


LOMA Projects	Timing
1. Mainline	2014 /
Expansions	2015
2. Line 9 Expansion	2014
3. Line 6B	2015
Expansion	
4. Southern Access	2015
5. Southern Access Extension	2015
6. Line 62 Twin	2015
7. Sandpiper	2017

## **Largest Oil Sands Service Provider**



#### **Primary Transportation Choice for Bakken Producers**



- Sandpiper provides access to premium eastern PADD II market
- Marathon is anchor shipper
- Sandpiper is expandable by 160 kbpd through horsepower upgrades

Enbridge Mainline
Saskatchewan System (ENF)
North Dakota System
Bakken Expansion Project
• 145 kbpd (In-service)



**Bakken Access Program (well connections)** 

• 145 kbpd (In-service)



**Berthold Rail** 

• 80 kbpd (In-service)

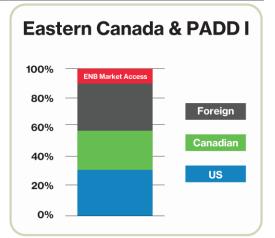


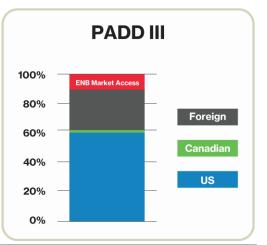
• 225/375 kbpd (Clearbrook / Superior)

## **Capacity post 2017**

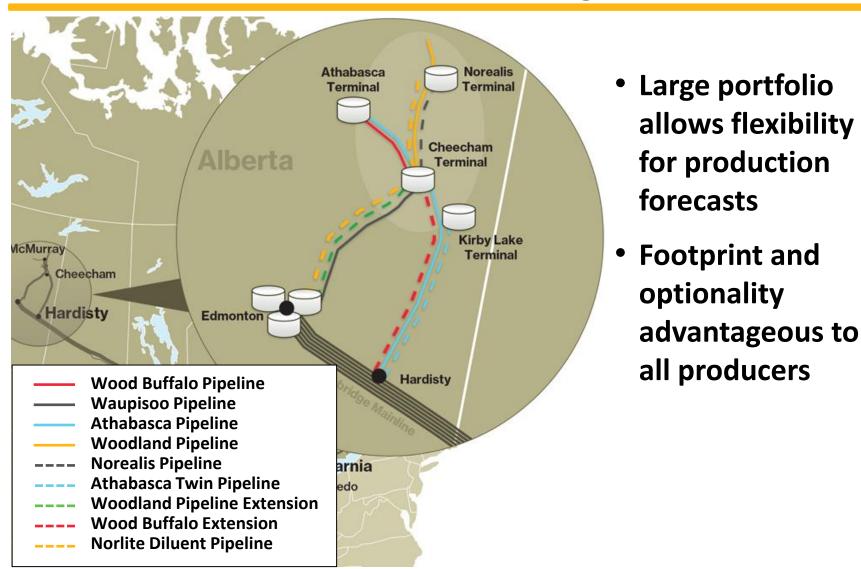
## Continue to dominate PADD II and grow market access to premium markets







#### **Established and Scalable Foothold in Regional Oil Sands**



#### **Continued Growth Potential**

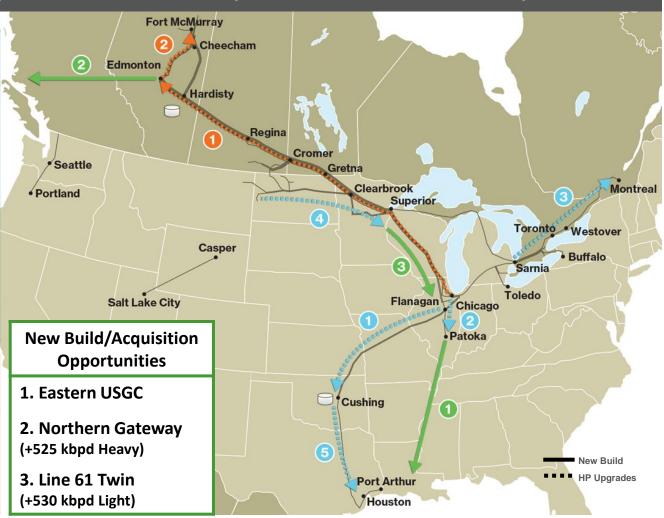
#### Mainline expansions facilitated by scalable market access options

## **Crude Asset Expansion Opportunities**

- 1. Flanagan South (+200 kbpd Heavy)
- 2. SAX Expansion (+150 kbpd Light)
- 3. Line 9 Expansion (+70 kbpd Light)
- 4. Sandpiper Expansion (+160 kbpd Light)
- 5. Seaway Expansion (+200 kbpd Heavy)

## Diluent Asset Expansion Opportunities

- 1. Southern Lights (+100 kbpd)
- 2. Norlite (+200 kbpd)



## **Key Takeaways**

- Execution and integration of secured growth progressing
- System optimization efforts contribute to earnings
- Unparallelled asset base and strong fundamentals will extend growth
- Enbridge is providing capacity and market access to our customers in a challenging environment



## Q&A

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