**Liquids Pipelines**

**grow organically. minimize risk. streamline.**

**North America’s premier crude oil infrastructure portfolio**

<table>
<thead>
<tr>
<th>70%</th>
<th>70% of total oil sands production can be transported on the Regional system to Edmonton and Hardisty</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.7 mmbpd</td>
<td>Market connectivity for 2.85 mmbpd of mainline capacity</td>
</tr>
<tr>
<td>39 mm</td>
<td>39 mm Barrels of contract storage in the Enbridge system</td>
</tr>
<tr>
<td>65%</td>
<td>65% of Canadian crude exports to the United States are transported on Enbridge system</td>
</tr>
</tbody>
</table>

**Largest crude oil pipeline network in the world**

- 27,600 km of pipe serving high quality producing basins
- Connected to the best refining markets
- Competitive and stable tolls drive highest producer netbacks
- Stable, low risk commercial underpinnings over the longer-term
- Strong, creditworthy customers
- Unique service offerings and flexibility
- Well-positioned for future growth
Liquids Pipelines are core to regulated pipeline and utility business model

- **2018e EBITDA by Business**
  - **4% Other**
  - **4% Southern Lights** (Long Term Take-or-Pay)
  - **3% Bakken System** (Common Carrier with indexed rate, Long Term Take-or-Pay)
  - **14% Regional Oil Sands** (Long Term Take-or-Pay)
  - **5% Express-Platte** (Long Term Take-or-Pay on Express)
  - **9% Mid-Continent & Gulf Coast** (Long Term Take-or-Pay)
  - **27% Lakehead System** (100% Cost of service or equivalent agreements*)
  - **33% Canadian Mainline** (Competitive Tolling Settlement)

Liquids Pipelines are core to regulated pipeline and utility business model

*Contract terms for our Lakehead system expansion projects mitigate volume risk for all expansions subsequent to Alberta Clipper. In the event volumes were to decline significantly the pipeline could potentially file cost of service rates. Similarly, the Bakken Classic system can also file cost of service rates if there is a substantial divergence between costs and revenues on the pipeline.

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Enbridge System Likely to be at Maximum Capacity

- **Mainline Volume Outlook**
  - **Alberta Clipper Expansion**
  - **System Optimization**
  - **Line 3 in-service**

- **Annual Capacity**

- **Enbridge system throughput to grow from 2.5 to 3.0 MMBPD by 2020**

- **Focused on maximizing throughput and operating efficiencies**
- **Additional system optimizations increased throughput by 87 kbpsd in 2H 2017**
- **Expect to be at or near capacity through expiry of CTS in 2021**
  - Strong supply growth
  - Competitive tolls
  - Limited pipeline alternatives
- **Line 3 Replacement project restores +375 kbpsd in 2H 2019**
## Liquids Pipelines Project Execution

### 2017 Projects Completed

<table>
<thead>
<tr>
<th>Project</th>
<th>ISD</th>
<th>Contract life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athabasca Pipeline Twin</td>
<td>Jan</td>
<td>25 yrs</td>
</tr>
<tr>
<td>Norlite Diluent Pipeline</td>
<td>May</td>
<td>25 yrs</td>
</tr>
<tr>
<td>Bakken Pipeline System</td>
<td>June</td>
<td>7-10 yrs</td>
</tr>
<tr>
<td>JACOS Hangingstone</td>
<td>Aug</td>
<td>20 yrs</td>
</tr>
<tr>
<td>Wood Buffalo Extension</td>
<td>Dec</td>
<td>25 yrs</td>
</tr>
</tbody>
</table>

*Projects placed into service 2017*

### 2019 Mainline Secured Projects

*Projects to be placed into service 2019*

### Project execution driving significant near term cash flow growth

### Line 3 Replacement Progressing Well

- Critical infrastructure replacement
- Construction progressing well in Canada & Wisconsin
- Minnesota regulatory process ongoing
- Target ISD 2H 2019

**Regulatory Milestones:**

- Aug 2017: Final Environmental Impact Statement (FEIS) published
- Sept/Oct 2017: Route Permit / Certificate of Need testimony submitted
- Oct/Nov 2017: Route Permit / Certificate of Need hearings
- Q1 2018: FEIS adequacy determination
- Q1 2018: ALJ Route/Need recommendation
- MPUC decision anticipated 2Q18
Canadian Oil Sands Positioned for Steady, Longer Term Growth

- Expected continued growth in the oil sands supports Enbridge systems upstream, mainline and market access
- Independent forecasts expect growth of ~850 KBPD in oil sands supply, 2016-2022
- Long term resource potential
  - 170 billion barrels of long lived reserves
  - In-situ break-even <$60 WTI
  - Average operating costs $5.75 – 7.50/Bbl
  - Emissions/unit reductions of 20% since 2012 (tonnes CO2/Bbl)

Canadian Oil Sands Supply Forecasts* (KBPD)

Enbridge Mainline Expected to Remain Highly Utilized

WCSB Pipeline Utilization Scenarios Post-2021

- Downstream commitments and strong netbacks ensure the Mainline is first choice for uncommitted WCSB barrels
- Mainline is expected to remain at full capacity in one export pipeline scenario

- Two new pipeline scenario unlikely to impact revenue through 2021
- Post 2021, Mainline competitiveness and new incentive tolling mechanism with volume protection ensures minimal financial impact
- Mainline returns to full capacity as production growth continues
Mainline Competitive Positioning beyond 2021

- PADD II market provides the highest netback for WCSB producers
- Spot barrels on 3rd party pipelines to USGC erodes WCSB producer netback
- Mainline connected to 1.9 mmbpd of ‘sole sourced’ refining demand in this region
- Over 1 mmbpd of long term take or pay downstream contracts

USGC Netback on Competing Spot Barrel

<table>
<thead>
<tr>
<th>Component</th>
<th>Netback</th>
</tr>
</thead>
<tbody>
<tr>
<td>USGC Pricing*</td>
<td>$50</td>
</tr>
<tr>
<td>Third Party Toll</td>
<td>($8)</td>
</tr>
<tr>
<td>WCS Netback</td>
<td>$42</td>
</tr>
</tbody>
</table>

Chicago Netback

<table>
<thead>
<tr>
<th>Component</th>
<th>Netback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago Pricing**</td>
<td>$53</td>
</tr>
<tr>
<td>Enbridge Toll</td>
<td>($5.50)</td>
</tr>
<tr>
<td>WCS Netback</td>
<td>$47.50</td>
</tr>
</tbody>
</table>

1.9 mmbpd Sole sourced supply

>1.0 mmbpd Downstream take-or-pay commitments

* USGC pricing assumes Maya/WCS pricing at $50/barrel
** WCS price in Chicago is price set by Maya + inland pipeline toll of $3/bbl from USGC

Long Track Record of Mutually Beneficial Agreements with Customers

- Operating cost management & efficiency incentives
- Quality & schedule incentives added
- Toll certainty & stability
- Upside volume incentive
- COS floor

Mainline Return on Capital Employed

<table>
<thead>
<tr>
<th>Year</th>
<th>Incentive Tolling Settlement (ITS)</th>
<th>ITS extended to 2009</th>
<th>Competitive Tolling Settlement (CTS)</th>
<th>TBD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994-2004</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2005-2011</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>2011-2021e</td>
<td>4%</td>
<td>4%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>2022+</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
</tr>
</tbody>
</table>

- Incentives
- Fair return on capital

CTS Re-negotiation Principles

- Interest alignment through incentive based frameworks
- Progressive and adaptive through market cycles and customer needs
- Appropriate sharing of value/risk/reward
- Fair return on capital
Low cost, highly executable, staged expansions to match supply growth

**Mainline Expansion Opportunities**

### Incremental Capacity 2019

<table>
<thead>
<tr>
<th>Description</th>
<th>Capacity (kBD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>System DRA Optimization</td>
<td>+75</td>
</tr>
<tr>
<td>BEP Idle*</td>
<td>+100</td>
</tr>
</tbody>
</table>

### Incremental Capacity 2019+

<table>
<thead>
<tr>
<th>Description</th>
<th>Capacity (kBD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Station Upgrades</td>
<td>+100</td>
</tr>
<tr>
<td>Line 4 Capacity Restoration</td>
<td>+25</td>
</tr>
<tr>
<td>Line 13 Reversal</td>
<td>+150</td>
</tr>
</tbody>
</table>

**Total Unsecured Incremental Capacity** +450

*Incremental capacity refers to long haul volumes.

**$2-4B in opportunities**

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**Other Development Opportunities**

### Oil Sands System

- Well positioned in oil sands to capture future supply growth
- Connected to growing projects
- Geographically diversified
- Additional capacity on trunk lines

### DAPL Expansion

- Bakken supply growth could drive future DAPL expansion
- Leveraging highly competitive tolls
- Strong Patoka/USGC markets

### Express-Platte

- Express-Platte system optimization or expansion
- Market access to Cushing/USGC
- Extension to Patoka

**$1-3B in opportunities**
Permian Strategy – Gray Oak

Objective: Expand liquids footprint into Permian Basin
Opportunity: High drilling activity and supply growth point to pipeline shortage.
Project Gray Oak: Joint venture with Phillips 66

USGC Strategy

Objective: Leverage expertise to expand footprint in USGC
Opportunity: Growing crude exports drive the need for deep water export facilities development
Leverage expertise in fee-for-service, independent terminal and pipeline operation

Strong fundamentals present opportunity to expand into new markets

Liquids Pipelines
Key Priorities

**grow organically.**
- Execute Line 3 Replacement Project
- Additional expansions of mainline and market access footprint

**minimize risk.**
- Re-negotiate mainline commercial agreement with appropriate risk mitigation framework

**streamline.**
- Assess revenue synergy opportunities
- Cost efficiency focus
Q&A

grow organically.
minimize risk.
streamline.