Impact of the North American Energy Boom on Latin America: Crude Oil Markets
US imports have steadily declined since 2006. Imports from Africa have decreased significantly, while imports from the Americas have remained steady.
The largest decline in US imports is in light oil, while heavy crude imports are growing.
The US is producing increasingly light oil from shale, driving down total imports. By 2016, net imports will equal only one quarter of US oil consumption.

Source: EIA, DrillingInfo, Colorado DNR, Texas RRC.
Imports are projected to decline in the near to medium term but then rise as tight oil production tapers off. Oil prices are a key variable.
The share of heavy crude imports from the Americas, particularly Canada, has increased significantly since 2004.

Source: EIA
Within the Americas, crude imports from Canada have spiked while imports from Venezuela and Mexico have dropped.
The Canadian Association of Petroleum Producers projects significant increases in unconventional crude production from Western Canada.
However, Canada’s oil production is particularly vulnerable to price fluctuations. Short term projections for production growth have been revised down since prices collapsed.
Canada also plans to build some 3Mb/d of new oil pipelines, including Keystone XL, to transport oil sands output to US refining markets and export terminals.
By 2018, Canada plans to add 2.87 million b/d of pipeline capacity to its existing 3.67 million b/d of capacity.

<table>
<thead>
<tr>
<th>Pipeline</th>
<th>Capacity (thousand b/d)</th>
<th>Target In-Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enbridge Mainline</td>
<td>2,500</td>
<td>Operating since 1950</td>
</tr>
<tr>
<td>Enbridge Alberta Clipper Expansion</td>
<td>+350</td>
<td>Q3 2015</td>
</tr>
<tr>
<td>(Construction started June 2013)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kinder Morgan Trans Mountain</td>
<td>300</td>
<td>Operating since 1953</td>
</tr>
<tr>
<td>Trans Mountain Expansion</td>
<td>+590</td>
<td>Q4 2017</td>
</tr>
<tr>
<td>(Scheduled to begin 2015-2016)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spectra Express</td>
<td>280</td>
<td>Operating since 1997*</td>
</tr>
<tr>
<td>*downstream Platte operating since 1952</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TransCanada Keystone</td>
<td>591</td>
<td>Operating since 2010</td>
</tr>
<tr>
<td>TransCanada Keystone XL</td>
<td>+830</td>
<td>2017**</td>
</tr>
<tr>
<td>**assuming approval by end of 2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gulf Coast Pipeline construction started 2012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Existing Capacity</td>
<td>3,671</td>
<td></td>
</tr>
<tr>
<td>Proposed Additional Capacity</td>
<td>1,770</td>
<td></td>
</tr>
</tbody>
</table>

Source: CAPP 2014 Crude Oil Forecast, Markets and Transportation
In contrast to Canada, Mexico’s exports have decreased significantly over the past decade.

Source: Pemex
The US absorbs the majority of Mexico’s crude oil exports, but it is gradually diversifying its markets.
Production of heavy crude has declined while light crude production has increased slightly.

Mexico Crude Production by Type (thousand b/d)

<table>
<thead>
<tr>
<th>Year</th>
<th>Maya</th>
<th>Istmo</th>
<th>Olmeca</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>3000</td>
<td>3200</td>
<td>2500</td>
</tr>
<tr>
<td>2003</td>
<td>3100</td>
<td>3300</td>
<td>2600</td>
</tr>
<tr>
<td>2004</td>
<td>3200</td>
<td>3400</td>
<td>2700</td>
</tr>
<tr>
<td>2005</td>
<td>3300</td>
<td>3500</td>
<td>2800</td>
</tr>
<tr>
<td>2006</td>
<td>3400</td>
<td>3600</td>
<td>2900</td>
</tr>
<tr>
<td>2007</td>
<td>3500</td>
<td>3700</td>
<td>3000</td>
</tr>
<tr>
<td>2008</td>
<td>3600</td>
<td>3800</td>
<td>3100</td>
</tr>
<tr>
<td>2009</td>
<td>3700</td>
<td>3900</td>
<td>3200</td>
</tr>
<tr>
<td>2010</td>
<td>3800</td>
<td>4000</td>
<td>3300</td>
</tr>
<tr>
<td>2011</td>
<td>3900</td>
<td>4100</td>
<td>3400</td>
</tr>
<tr>
<td>2012</td>
<td>4000</td>
<td>4200</td>
<td>3500</td>
</tr>
<tr>
<td>2013</td>
<td>4100</td>
<td>4300</td>
<td>3600</td>
</tr>
<tr>
<td>2014</td>
<td>4200</td>
<td>4400</td>
<td>3700</td>
</tr>
</tbody>
</table>

Source: Pemex
Pemex projects that Mexico’s total crude production will increase following the energy reform. Light oil production will rise significantly.
In Venezuela, oil production appears to be declining gradually, though estimates vary.
Venezuela’s total exports have not dropped as rapidly as the decline in exports to the US.
Venezuela has expanded oil exports to new markets, particularly India and China.
Globally, the rise in oil demand will be driven by China, India and other Asian countries.

Source: EIA
Questions for Discussion

Crude Oil Market Trends
Will the trend toward declining Latin American exports to the US continue? How does the recent oil price collapse impact crude oil flows in the Americas? How would the construction of Keystone XL affect Mexican and Venezuelan oil exports to the US?

New Markets for Latin American Heavy Crude
Should Latin American countries do more to diversify crude exports? Where are the new market opportunities for Latin American crude producers? What can Latin American countries do to tap new markets?

Geopolitical Implications
What are the geopolitical implications of reduced US crude imports from Mexico and Venezuela? How will this impact bilateral relations with the US, China and other countries?
LAC 6 and USA Petroleum Flows
Ramón Espinasa | Lead Oil & Gas Specialist, IADB
Inter-American Dialogue | March 19, 2015
LAC 6 and USA Domestic Petroleum Balances
Domestic Market: Argentina

Source: International Energy Agency
Domestic Market: Argentina

Source: International Energy Agency
Domestic Market: Brazil

Source: International Energy Agency
Domestic Market: Brazil

Consumption
Production
Balance

Million barrels per day

Source: International Energy Agency
Domestic Market: Colombia

Source: International Energy Agency
Domestic Market: Colombia

Source: International Energy Agency
Domestic Market: Ecuador

Source: International Energy Agency
Domestic Market: Ecuador

Source: International Energy Agency

<table>
<thead>
<tr>
<th>Year</th>
<th>Net exporter</th>
<th>Increase</th>
<th>Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>0.25 mbd</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>0.28 mbd</td>
<td>0.03 mbd</td>
<td></td>
</tr>
</tbody>
</table>
Domestic Market: Mexico

Source: International Energy Agency
Domestic Market: Mexico

Consumption
Production
Balance

Source: International Energy Agency
Domestic Market: USA

<table>
<thead>
<tr>
<th>Year</th>
<th>Consumption</th>
<th>Production</th>
<th>Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>13.7 mbd</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>10.6 mbd</td>
<td></td>
<td>3.1 mbd</td>
</tr>
</tbody>
</table>

Source: International Energy Agency

Net importer 13.7 mbd 2000
Net importer 10.6 mbd 2015
Increase 3.1 mbd
Domestic Market: Venezuela

Source: International Energy Agency
Domestic Market: Venezuela

Source: International Energy Agency

<table>
<thead>
<tr>
<th>Year</th>
<th>Net exporter</th>
<th>Decline</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>2.3 mbd</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>1.7 mbd</td>
<td>0.48 mbd</td>
</tr>
</tbody>
</table>

Consumption

Production

Balance

Million barrels per day
Domestic Market: LAC-6

Source: International Energy Agency
Domestic Market: LAC-6

<table>
<thead>
<tr>
<th>Year</th>
<th>Net exporter</th>
<th>Decline</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>3.2 mbd</td>
<td></td>
<td>IEA</td>
</tr>
<tr>
<td>2015</td>
<td>1.8 mbd</td>
<td>1.4 mbd</td>
<td></td>
</tr>
</tbody>
</table>

- **Production**
- **Consumption**
- **Balance**

Source: International Energy Agency
Oil Trade: Argentina & USA

Source: Energy Information Administration
Oil Trade: Argentina & USA

<table>
<thead>
<tr>
<th>Year</th>
<th>Net</th>
<th>Balance</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>0.05 mbd</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| 2015 | 0.02 mbd | | Decline 0.07 mbd

Source: Energy Information Administration
Oil Trade: Argentina & USA

Source: UN Comtrade

<table>
<thead>
<tr>
<th>Year</th>
<th>% Total Crude Oil Exports to US</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>21%</td>
</tr>
<tr>
<td>2013</td>
<td>27%</td>
</tr>
</tbody>
</table>

Increase: 29%
Oil Trade: Brazil & USA

Source: Energy Information Administration
Oil Trade: Brazil & USA

Source: Energy Information Administration
Oil Trade: Brazil & USA

Source: UN Comtrade

- 2004: 3%
- 2013: 21%

Increase: 600%
Oil Trade: Colombia & USA

Source: Energy Information Administration
Oil Trade: Colombia & USA

Source: Energy Information Administration
Oil Trade: Colombia & USA

% total crude oil exports sent to US

- 2004: 89%
- 2013: 42%

Decrease 53%

Source: UN Comtrade
Oil Trade: Ecuador & USA

Source: Energy Information Administration
Oil Trade: Ecuador & USA

Source: Energy Information Administration

<table>
<thead>
<tr>
<th>Year</th>
<th>Net</th>
<th>Balance Decline</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>0.16 mbd</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>0.12 mbd</td>
<td>0.04 mbd</td>
</tr>
</tbody>
</table>
Oil Trade: Ecuador & USA

Source: UN Comtrade

% total crude oil exports sent to US

- 2004: 48%
- 2013: 63%

Increase: 31%
Oil Trade: Mexico & USA

Source: Energy Information Administration
Oil Trade: Mexico & USA

Source: Energy Information Administration

<table>
<thead>
<tr>
<th>Year</th>
<th>Net</th>
<th>Balance</th>
<th>Decline</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>1.3 mbd</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>0.1 mbd</td>
<td></td>
<td>1.2 mbd</td>
</tr>
</tbody>
</table>

Exports
Imports
Balance
Oil Trade: Mexico & USA

Total crude oil exports sent to US

- 2004: 75%
- 2013: 72%

Decrease 4%

Source: UN Comtrade
Oil Trade: Venezuela & USA

Source: Energy Information Administration
Oil Trade: Venezuela & USA

Source: Energy Information Administration

<table>
<thead>
<tr>
<th>Year</th>
<th>Net</th>
<th>Balance Decline</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>1.3 mbd</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>0.6 mbd</td>
<td>0.7 mbd</td>
</tr>
</tbody>
</table>
Oil Trade: Venezuela & USA

% total crude oil exports sent to US

Decrease 16%

Source: UN Comtrade
Oil Trade: LAC-6 & USA

Source: Energy Information Administration
## Oil Trade: LAC-6 & USA

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Export</th>
<th>Balance Decline</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>3.1 mbd</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>1.0 mbd</td>
<td>2.1 mbd</td>
</tr>
</tbody>
</table>

### Source
Energy Information Administration
Oil Trade: LAC-6 & USA

Source: UN Comtrade
Oil Trade: USA & LAC-6

Source: Energy Information Administration
Oil Trade: USA & LAC-6

Source: Energy Information Administration
LAC 6 and USA
Imports and Exports
Oil Trade: USA Imports from LAC-6

Source: Energy Information Administration
Oil Trade: USA Imports from LAC-6

Source: Energy Information Administration
Oil Trade: USA Imports from LAC-6

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Oil Trade: USA Exports to LAC-6

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Source: Energy Information Administration
Oil Trade: USA & LAC-6 Balance

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