A Snapshot of PEMEX

1. Upstream
2. Midstream & Downstream
3. Overall Financial Performance
4. Business Outlook
• According to the IEA, by 2040, crude oil demand is expected to grow 6% up to 103 MMbd, while natural gas consumption increases by 50%.
PEMEX: The Most Important Company in Mexico

8th Crude oil producer

Main producer of oil, gas and refined products in Mexico

14th Refining company worldwide

Holder of 95% of the country's 1P reserves

Key player in hydrocarbons logistics infrastructure

More than 40,000 km of pipelines

15th Logistics company in the world by assets

Largest Tax Contributor

MXN 1.6 billion annual revenues

8th Drilling company

5th Producer of petrochemicals in Mexico

1st Producer of phosphates in LATAM

9 Gas Processing Complexes

74 Storage and distribution terminals

Close to 1,500 tank trucks

16 Ships with transportation capacity of 4,618 Mb

258 Operating platforms

9,000 Wells

98th largest company

7th Trading company in the world

1 Last five years average.
2 Source: Fortune 500 ranking.
Distribution of PEMEX’s Reserves

PEMEX holds 95% of Mexico’s hydrocarbon reserves

<table>
<thead>
<tr>
<th>Basin</th>
<th>1P (90%)</th>
<th>2P (50%)</th>
<th>3P (10%)</th>
<th>Conv.</th>
<th>Non Conv.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southeastern</td>
<td>7.2</td>
<td>11.1</td>
<td>14.5</td>
<td>11.6</td>
<td></td>
</tr>
<tr>
<td>Tampico Misantla</td>
<td>1.0</td>
<td>3.4</td>
<td>6.0</td>
<td></td>
<td>3.3</td>
</tr>
<tr>
<td>Burgos</td>
<td>0.2</td>
<td>0.3</td>
<td>0.4</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>Veracruz</td>
<td>0.1</td>
<td>0.2</td>
<td>0.2</td>
<td>0.6</td>
<td></td>
</tr>
<tr>
<td>Sabinas</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.4</td>
<td></td>
</tr>
<tr>
<td>Deepwater</td>
<td>0.1</td>
<td>0.2</td>
<td>1.1</td>
<td>6.0</td>
<td></td>
</tr>
<tr>
<td><strong>Total PEMEX</strong></td>
<td><strong>8.6</strong></td>
<td><strong>15.1</strong></td>
<td><strong>22.1</strong></td>
<td><strong>18.2</strong></td>
<td><strong>5.2</strong></td>
</tr>
</tbody>
</table>

MMMboe (billion barrels of oil equivalent)

1 As of January 1, 2017. Numbers may not total due to rounding.
2 Prospective resources assigned to PEMEX in Round Zero
Note: As of January 1, 2017. 1P includes discoveries, developments, revisions and delineations. 3P replacement rate only considers new discoveries. Reflects reserve replacements conducted by PEMEX.
2017 Achievements

- Trion farm-out with BHP Billiton
- Consortium formed by PEMEX, Chevron and Inpex was awarded Block 3 North in deep waters
- PEMEX was awarded two blocks in shallow waters through consortia with DEA and Ecopetrol
- Cárdenas-Mora & Ogarrio are PEMEX’s first two onshore farm-outs with Cheiron and DEA
- Migration without a partner of the fields Ek and Balam in shallow waters
- Improvement in fiscal regime for fields that were non-profitable after taxes
- Joint venture with Air Liquide for the supply of hydrogen to our Tula refinery
- The first Open Season offered capacity was awarded to Tesoro
Key Highlights as of September 2017

- Average production platform in line with the annual target of 1,944 Mbd
- Uninterrupted fuel supply throughout the country despite hurricanes and earthquakes
- Accumulated net result increased by 107.2%
- Accumulated operating income totaled MXN 174 billion (Jan – Sep 2017)
- Administrative, distribution, transportation and sales expenditures remained stable
- Implementation of crude oil hedging program to protect PEMEX’s budget against falls in oil prices
- Divestiture of stake in Los Ramones II Norte gas pipeline
Content

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   Midstream & Downstream
   Overall Financial Performance
   Business Outlook
Upstream: Current Status and Challenges

• PEMEX continues to be a main player in the O&G industry
• The challenge has been replacing Cantarell - a giant field that produced 2 million barrels of crude oil per day - to stabilize and eventually increase production

Crude Oil Production

1 Includes non-capitalized maintenance.
Source: PEMEX 2017
Industry Cost Leader

- Exploitation strategies focused on shallow waters have allowed PEMEX to maintain very competitive production costs, as compared to most of its peers.
- Lower production costs provide greater flexibility, especially under lower crude oil price scenarios.

**Production Costs**, a,b (USD / boe)

<table>
<thead>
<tr>
<th>Year</th>
<th>Production cost before taxes</th>
<th>Taxes and Duties</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>5.2</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>6.1</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>6.8</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>7.9</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>8.2</td>
<td>2.7</td>
</tr>
<tr>
<td>2015</td>
<td>6.7</td>
<td>2.3</td>
</tr>
<tr>
<td>2016</td>
<td>5.5</td>
<td></td>
</tr>
</tbody>
</table>

**2016 Benchmarking: Production Costs**, 1 (USD / boe)

<table>
<thead>
<tr>
<th>Company</th>
<th>Production Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrobras</td>
<td>16.27</td>
</tr>
<tr>
<td>Chevron-Texaco</td>
<td>13.15</td>
</tr>
<tr>
<td>Eni S.P.A.</td>
<td>12.55</td>
</tr>
<tr>
<td>Connoco Phillips</td>
<td>12.00</td>
</tr>
<tr>
<td>Royal Dutch / Shell</td>
<td>10.92</td>
</tr>
<tr>
<td>Exxon Mobil</td>
<td>9.89</td>
</tr>
<tr>
<td>BP</td>
<td>8.46</td>
</tr>
<tr>
<td>PEMEX</td>
<td>7.78</td>
</tr>
<tr>
<td>Total S.A.</td>
<td>6.14</td>
</tr>
<tr>
<td>Statoil</td>
<td>5.00</td>
</tr>
</tbody>
</table>

a) Figures in nominal values.
Upstream: New Production Frontiers

- Underinvestment and limited access to know-how has restricted intensive exploitation of new complex frontiers

Deepwater Infrastructure

Source: National Geographic

Shale Potential

Source: CNH with information from North Dakota Department of Mineral Resources, Oklahoma Geological Survey, Texas Railroad Commission, Bureau of Ocean Energy Management, Oil & Gas Journal
Upstream: Business Plan

• With profitability as its ultimate goal, the Business Plan contemplates increased production and investment through different business schemes such as JVs and farm-outs to maintain and gradually increase the production platform

• Aggressive farm-out program
• Development of fields that are profitable for the country and which, under similar fiscal conditions than privates, are profitable for PEMEX after taxes
• Incremental income from farm-out production is shared between PEMEX and the Federal Government

Business Plan Scenario

• Concentrates on assignments that are profitable after taxes

Improved Scenario

Improved (Business Plan)

PEMEX production

Crude Oil Production¹

Mbd

<table>
<thead>
<tr>
<th>Year</th>
<th>Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>2.601</td>
</tr>
<tr>
<td>2010</td>
<td>2.577</td>
</tr>
<tr>
<td>2011</td>
<td>2.533</td>
</tr>
<tr>
<td>2012</td>
<td>2.548</td>
</tr>
<tr>
<td>2013</td>
<td>2.522</td>
</tr>
<tr>
<td>2014</td>
<td>2.429</td>
</tr>
<tr>
<td>2015</td>
<td>2.267</td>
</tr>
<tr>
<td>2016</td>
<td>2.154</td>
</tr>
<tr>
<td>2017</td>
<td>1.944</td>
</tr>
<tr>
<td>2018</td>
<td>1.951</td>
</tr>
<tr>
<td>2019</td>
<td>1.982</td>
</tr>
<tr>
<td>2020</td>
<td>2.017</td>
</tr>
<tr>
<td>2021</td>
<td>2.141</td>
</tr>
</tbody>
</table>

1 Includes PEMEX’s production - estimations sent to the Ministry of Finance on September 2017 - and others - as considered in the Business Plan published in November 2016.
# Upstream: Farm-outs at a glance

<table>
<thead>
<tr>
<th>Farm-Out</th>
<th>Trion</th>
<th>Cárdenas-Mora</th>
<th>Ogarrio</th>
<th>Nobilis-Maximino</th>
<th>Ayín-Batsil</th>
<th>7 clusters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winner</td>
<td>BHP Billiton (Australia)</td>
<td>Cheiron Holdings Limited (Egypt)</td>
<td>DEA Deutsche Erdoel AG (Germany)</td>
<td>Will be part of a new bidding process</td>
<td>To be defined</td>
<td></td>
</tr>
<tr>
<td>Initial payment</td>
<td>570</td>
<td>125</td>
<td>190</td>
<td>To be defined</td>
<td>To be defined</td>
<td></td>
</tr>
<tr>
<td>Additional royalty value</td>
<td>4%</td>
<td>13%</td>
<td>13%</td>
<td>To be defined</td>
<td>To be defined</td>
<td></td>
</tr>
<tr>
<td>Cash tie-break payment (MMUSD)</td>
<td>624</td>
<td>41.5</td>
<td>213.9</td>
<td>To be defined</td>
<td>To be defined</td>
<td></td>
</tr>
<tr>
<td>3P Reserves (MMboe)</td>
<td>485</td>
<td>93</td>
<td>54</td>
<td>502</td>
<td>359</td>
<td>392</td>
</tr>
<tr>
<td>Type of Hydrocarbon</td>
<td>Light crude oil</td>
<td>Light crude oil</td>
<td>Light crude oil</td>
<td>Light crude oil</td>
<td>Heavy oil</td>
<td>Medium Light oil</td>
</tr>
<tr>
<td>Type of Field</td>
<td>Deep waters</td>
<td>Onshore</td>
<td>Onshore</td>
<td>Deep waters</td>
<td>Shallow waters</td>
<td>Onshore</td>
</tr>
<tr>
<td>Type of Contract</td>
<td>License</td>
<td>License &amp; Payment-In-Kind</td>
<td>License &amp; Payment-In-Kind</td>
<td>Production-sharing</td>
<td>To be defined</td>
<td>To be defined</td>
</tr>
</tbody>
</table>
**Upstream: Recent Developments (Trion & Block 3)**

**Trion**

- BHP Billiton will invest up to USD 1.9 billion before PEMEX makes additional contributions
- Joint operating agreement was signed on March 3, 2017
- PEMEX expects to invest USD 600 million by the time initial production is achieved

**Perdido Fold Belt – Block 3**

- Joint Venture with Chevron and Inpex
- The contract considers 3,374 work units, equivalent to USD 3.4 million
- No wells were committed for this contract
- Contract was signed on February 28, 2017
Upstream: Recent Developments (Cárdenas-Mora & Ogarrio)

Cárdenas-Mora

- Cheiron Holdings offered a cash tie-break of USD 41.5 million
- Daily average production: 13.7 thousand barrels of oil equivalent per day (Mboed)
- USD 166.5 million of PEMEX’s previous investments were recognized
- 3P Reserves: 93.19 million barrels of oil equivalent (MMboe)
- Total expected investment: USD 127.3 million

Ogarrio

- Deutsche Erdoel AG (DEA) offered a cash tie-break of USD 213.9 million. Of this amount, PEMEX will receive USD 183 million
- Daily average production: 15.6 Mboed
- PEMEX’s previous investments: USD 373 million
- 3P Reserves: 53.97 MMboe
- Total expected investment: USD 95.2 million
Upstream: Upcoming Developments (Additional farm-outs)

Nobilis-Maximino
- 3P Reserves: 502 MMboe
- Type of hydrocarbons: Light crude oil
- Water Depth: 3,000 meters (deep waters)
- Contract type: License
- Will be part of a new bidding process to be defined in 2018

Ayín-Batsil
- 3P Reserves: 359 MMboe
- Type of Hydrocarbons: Heavy crude oil
- Water Depth: 80 - 170 meters (shallow waters)
- Contract type: Production-Sharing
- Will be part of a new bidding process in the first half of 2018
## Seven Clusters

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Reserves (MMboe)</th>
<th>Oil Type</th>
<th>Area (Km²)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1P</td>
<td>2P</td>
<td>3P</td>
</tr>
<tr>
<td>Juspí</td>
<td>26</td>
<td>37</td>
<td>114</td>
</tr>
<tr>
<td>Bedel-Gasifero</td>
<td>90</td>
<td>111</td>
<td>119</td>
</tr>
<tr>
<td>Cinco Presidentes</td>
<td>29</td>
<td>40</td>
<td>41</td>
</tr>
<tr>
<td>Giraldas-Sunuapa</td>
<td>69</td>
<td>71</td>
<td>71</td>
</tr>
<tr>
<td>Bacal-Nelash</td>
<td>10</td>
<td>12</td>
<td>21</td>
</tr>
<tr>
<td>Artesa</td>
<td>14</td>
<td>22</td>
<td>23</td>
</tr>
<tr>
<td>Lacamango</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

- **juspi**: 26/37/114, light oil, 450 Km²
- **Bedel-Gasifero**: 90/111/119, medium oil, 1,165 Km²
- **Cinco Presidentes**: 29/40/41, light oil, 167 Km²
- **Giraldas-Sunuapa**: 69/71/71, light oil, 1,727 Km²
- **Bacal-Nelash**: 10/12/21, light oil, 117 Km²
- **Artesa**: 14/22/23, light oil, 890 Km²
- **Lacamango**: 3/3/3, medium oil, 16 Km²

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**Map**: The map shows the distribution of clusters across the Gulf of Mexico, with additional details on the clusters and their respective reserves. Each cluster is marked with its name and the associated oil type and area. The map also indicates the asset boundaries for different regions such as Veracruz, Oaxaca, Tabasco, and Chiapas.
PEMEX discovered the largest onshore reservoir in 15 years: Ixachi-1

- Result of great exploration efforts and investments over the last 30 years
- Original volume of 1,500 MMboe
- 3P Reserves of approximately 350 MMboe
- Wet gas & condensates reservoir located at 6,000-7,000 meters below sea level
- Closeness to existing infrastructure could benefit the project’s cost structure
- Expected initial production in 2020
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Midstream: Investment Opportunities

- Further gasoline storage capacity and pipelines are required in Mexico. The U.S. has 27 times more infrastructure to supply fuel and 45 times more storage terminals than Mexico.

Gasoline Storage Days by Country¹

<table>
<thead>
<tr>
<th>Country</th>
<th>Storage Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>99</td>
</tr>
<tr>
<td>USA</td>
<td>90</td>
</tr>
<tr>
<td>China</td>
<td>90</td>
</tr>
<tr>
<td>Japan</td>
<td>70</td>
</tr>
<tr>
<td>South Africa</td>
<td>60</td>
</tr>
<tr>
<td>India</td>
<td>3</td>
</tr>
<tr>
<td>Mexico</td>
<td>2</td>
</tr>
<tr>
<td>Iran</td>
<td></td>
</tr>
</tbody>
</table>

1 Source: Strategy, PwC 2017
2 Source: http://pipeline101.com/where-are-pipelines-located
3 Source: EIA 2017
Downstream: Current Status and Challenges

Infrastructure

6 Refineries in Mexico and one in U.S.A. 1,942 Mbp\(^d\)
9 Gas Processing Centers 5,912 MMcfd\(^3\)
2 Petrochemical Complexes 1,694 Tpa\(^4\)

Main causes for non-scheduled shutdowns 2016\(^6\)

<table>
<thead>
<tr>
<th>Cause</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen Supply</td>
<td>63%</td>
</tr>
<tr>
<td>Service supply (steam, water, electricity)</td>
<td>11%</td>
</tr>
<tr>
<td>Equipment and Processes</td>
<td>20%</td>
</tr>
<tr>
<td>Repairment delays</td>
<td>3%</td>
</tr>
</tbody>
</table>

Non-Scheduled Shutdowns Index

- International reference (goal)
- 2013: 10.1%
- 2014: 11.2%
- 2015: 12.7%
- 2016: 26.3%
- 2017\(^5\): 31.9%

1 From Pemex Industrial Transformation
2 Capacity in Mexico is 1,602 Mbd, Deer Park capacity is 340 Mbd.
3 Million cubic feet per day.
4 Tons per year
5 Average January – September
6 January – August 2016
Midstream & Downstream: Business Plan

- Underinvestment, supply commitment and lack of cost recognition are being and will continue to be addressed in the upcoming years to reverse the accumulated losses in the midstream and downstream divisions

**PEMEX Industrial Transformation**
- Partnerships in operation of auxiliary activities and revamps of refineries
- Operational discipline and reliability
- Timely attention to risk factors
- Cost efficiency and gradual acknowledgment of opportunity costs in transportation prices
- Pipeline custody
- Illicit markets

**PEMEX Logistics**
- Open Season
- Focus on profitable business lines

---

**Impact of the Strategic Initiatives on the Financial Balance** until 2025

- **Financial Balance 2025** (Equivalent to -96.3 in 2017)
- **Partnerships**
- **Safe and reliable operations**
- **Acknowledgment and efficiency in transportation costs**
- **Stolen Product**

The financial balance considers the result from subtracting total expenses (including financing costs) from total revenues.
Midstream & Downstream: Upcoming Developments

- The Mexican fuels market is moving towards an open, competitive and market-driven price structure; all the country has liberalized fuel prices since November 30th

**Open Season:** Pemex Logistics is offering its non-used storage and distribution capacity to third-parties, which will yield additional revenues

**Stage 1: March 30, 2017**
- Baja California
- Sonora

**Stage 2: June 15, 2017**
- Chihuahua
- Coahuila
- Nuevo León
- Tamaulipas
- Gómez Palacio, Durango

**Stage 3: October 30, 2017**
- Baja California Sur
- Durango
- Sinaloa

**Stage 4: November 30, 2017**
- Center and Eastern Mexican States

1. At fees 10% above the minimum required
2. Announced by the Mexican Energy Regulatory Commission (CRE) on November 16, 2017
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- **Overall Financial Performance**
- Business Outlook
Operating income as of the third quarter of 2017 averaged USD 3,163 million.

Debt’s maturity profile was extended to 7.5 years.
PEMEX Recorded a Positive Net Result from January to September 2017

- Accumulated positive net result as of September 30, 2017 for the first time since 2012, when the price of the Mexican Crude Oil Mix was 2.3 times higher.

**Net Result and Mexican Crude Oil Mix Price**

Average: 63.5 USD/b

- 104 USD/b
- 43 USD/b

1. January – September average per year.
2. Financial information is reported under IFRS; Audited Quarterly Results, except 1Q17, 2Q17 and 3Q17 (preliminary)
Net Indebtedness Trend

Since 2016, financial deficit has decreased.

Net indebtedness for 2017 is **substantially lower** than previous years, confirming the trend stated in our Business Plan.

2017 **Debt ceiling:** MXN 150 billion (≈USD 8 billion)

**Financial deficit** of the year: MXN 94 billion (≈USD 5 billion)

- Any additional transaction throughout the year would be aimed to term-out PEMEX’s maturity profile or substitute bank financing.

1 Debt ceiling for 2018 pending approval
Note: All numbers in billion pesos; exchange rate: 18.6 pesos per dollar
In July, PEMEX carried out a bond transaction with the following characteristics:

- The reopening of two reference bonds due 10 and 30 years, and yield to maturity of 5.75% and 6.90%, respectively. This transaction was approximately three times oversubscribed.

- Repurchase of bonds totaling USD 1,739 million due 2018 and 2019, to improve our amortization profile and increase the average debt maturity.

**Liability Management – Repurchase Transaction**

USD million, July 2017

- Debt maturity
- Decrease in debt maturity
- Revolving credit facilities
Diversified Debt Structure

- PEMEX’s portfolio strategy has prioritized the development of new sources of financing to diversify its investor base and currencies.

- To reduce external impacts, the company has chosen a hedging strategy that matches its U.S. dollar-based income structure.

Note: As of September 30, 2017. Sums may not total due to rounding.
Credit Rating Agencies recognize PEMEX’s strategic importance for Mexico

2017 PEMEX annual rating revisions highlight:

- Stable finances
- Expectation of improved profitability due to the Energy Reform
- Close linkage to Mexican Government & fiscal relevance
- Key energy supplier

<table>
<thead>
<tr>
<th>Rating Agency</th>
<th>Last Revision</th>
<th>Global Scale</th>
<th>Outlook</th>
<th>National Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fitch</td>
<td>August 2017</td>
<td>BBB+</td>
<td>Stable</td>
<td>AAA(mex)</td>
</tr>
<tr>
<td>S&amp;P</td>
<td>August 2017</td>
<td>BBB+</td>
<td>Stable</td>
<td>mxAAB</td>
</tr>
<tr>
<td>Moody’s</td>
<td>April 2017</td>
<td>Baa3</td>
<td>Negative</td>
<td>Aa3.mx</td>
</tr>
<tr>
<td>R&amp;I</td>
<td>April 2017</td>
<td>BBB+</td>
<td>Stable</td>
<td>N.A.</td>
</tr>
<tr>
<td>HR Ratings</td>
<td>September 2017</td>
<td>HR A-(G)</td>
<td>Stable</td>
<td>HR AAA</td>
</tr>
</tbody>
</table>

Markets respond positively to PEMEX’s strategy

PEMEX’s efforts and business strategy have yielded tangible results, as shown in the spread between PEMEX’s 10Y benchmark and both Mexico’s UMS 10Y and U.S. Treasury.

Source: Bloomberg
Final Remarks

PEMEX has **tackled short-term challenges** with determination and today has **stable finances**
- Budget adjustment
- Strengthening of financial balance
- Renewed access to financial markets and active debt management
- Primary surplus in 2017
- Covered financial needs until 2018
- Hedged on crude oil prices to ensure budget stability

PEMEX has **harnessed the Energy Reform’s historic opportunity** with the implementation of its Business Plan:
- The first farm-out in deep waters is already signed (Trion)
- First two onshore farm-outs (Ogarrio and Cárdenas-Mora)
- Additional deep waters and shallow waters farm-outs Nobilis Maximino and Ayín-Batsil
- Alliances for non-PEMEX’s fields with major oil & gas companies
- Pemex Industrial Transformation first partnerships for hydrogen supply
- Gasoline, diesel and natural gas price liberalization
- Pemex Logistics has successfully completed the first stage of the Open Season

**With the Energy Reform in place and stable finances, PEMEX has the historic opportunity to modernize and remain as Mexico’s flagship company**
Financial Outlook: Scenarios with Realistic Premises

2017 marks an inflection point:

- Primary Surplus (first time since 2012): MXN 8.4 billion
- Attainable Production Platform: 1.944 MMbd
- Conservative Price Projection: USD 42 per barrel

In 2016 PEMEX exceeded its financial balance and production goals

1 Source: Bloomberg (October) and PEMEX.