**PEMEX: Integrated Oil & Gas Company**

**Upstream**
- 8th Crude oil producer\(^1\)
- Crude oil production: 1,948 Mbd
- Natural gas production: 4,205 MMcfd\(^2\)
- Offshore crude oil production: 81%
- Production mix: 54% heavy crude; 35% light crude; 11% extra-light crude
- 256 Operating platforms
- 8,008 Operating wells

**Downstream**
- 16\(^{th}\) Refining company worldwide\(^1\)
- 6 refineries in Mexico with a refining capacity of 1,602 Mbd
- 1 refinery in JV with Shell in Deer Park, Texas (340 Mbd)
- Crude oil process: 767 Mbd
- Petroleum products: 776 Mbd
- Petrochemical products: 3,275 Mt
- 9 Gas Processing Complexes (5,912 MMcfd)
- 2 Petrochemical Complexes (1,694 Tpy)

**Midstream**
- Strategically positioned logistic infrastructure: 17,000 km of pipelines
- 74 Storage and distribution terminals
- 16 Marine terminals
- 10 Liquefied gas terminals
- 1,485 Tank trucks
- 17 Ships
- 511 Tank cars
- 56 pumping and compression stations

**Commercialization**
- 4th largest oil exporter to the USA
- MXN 1.4 trillion annual revenues\(^3\)
- Crude oil exports: 1,174 Mbd
- 11,586 Service stations\(^4\)
- Natural gas and L.P. gas:
  - First-hand sales to industrial customers
- Aromatics:
  - First-hand sales to industrial customers

---

1. Source: Petroleum Intelligence Weekly, Top 50 Rankings of the World’s Oil Companies, November 2017
2. Does not include nitrogen
3. Last five years’ average (2013-2017)
4. As of December 31, 2017, retail service stations under the PEMEX brand
PEMEX’s Reserves

PEMEX holds 95% of Mexico’s hydrocarbon reserves

<table>
<thead>
<tr>
<th>Basin</th>
<th>Reserves¹</th>
<th>Prospective Resources²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1P (90%)</td>
<td>2P (50%)</td>
</tr>
<tr>
<td>Southeastern</td>
<td>7.2</td>
<td>11.1</td>
</tr>
<tr>
<td>Tampico-Misantla</td>
<td>1.0</td>
<td>3.4</td>
</tr>
<tr>
<td>Burgos</td>
<td>0.2</td>
<td>0.3</td>
</tr>
<tr>
<td>Veracruz</td>
<td>0.1</td>
<td>0.2</td>
</tr>
<tr>
<td>Sabinas</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Deepwater</td>
<td>0.1</td>
<td>0.2</td>
</tr>
<tr>
<td><strong>Total PEMEX</strong></td>
<td><strong>8.6</strong></td>
<td><strong>15.1</strong></td>
</tr>
</tbody>
</table>

MMMboe (billion barrels of oil equivalent)

1 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.

2 Prospective resources assigned to PEMEX in Round Zero.
Operating Developments and Achievements (1/2)

1. For the second year in a row, annual crude oil production target was met: 1,948 Mbd

2. Successful implementation of the tools provided by the Energy Reform:
   - Joint venture with Air Liquide for hydrogen supply at the Tula refinery
   - Migration without a partner of the shallow water cluster Ek-Balam
   - Associations with Deutsche Erdoel AG and Ecopetrol for two blocks in CNH’s Round 2.1
   - First phase of Pemex Logistics’ Open Season
   - Divestment of stake in Los Ramones II Norte pipeline
   - Installation of coker unit at the Tula refinery
   - Signing of first Exploration and Extraction Contract migration of onshore fields Santuario and El Golpe.
   - First two onshore farm-outs: Ogarrio and Cárdenas-Mora
Operating Developments and Achievements (2/2)

3. Discovery of the largest onshore reservoir in the last 15 years: Ixachi
   - 3P Reserves of approximately 366 MMboe

4. Uninterrupted fuel supply despite hurricanes and earthquakes

5. Natural gas use of 95.8%

6. Implementation of a commercial strategy based on the most profitable markets

7. Follow up on the instrumentation of the Energy Reform in 2018: PEMEX was awarded 4 blocks in CNH’s Round 2.4

8. Migration of onshore field Misión
2017 Financial Developments and Achievements

• Financial balance goal of MXN -94 billion was met

• As a part of the strategy presented in the Business Plan, PEMEX will develop cost efficient fields that are profitable for the firm. A “win-win” strategy for both the State and PEMEX was implemented by reducing the fiscal burden to fields that were not profitable after taxes. Positive impact of MXN 7.8 billion

• Approval of a yearly Crude Oil Hedging Program to protect PEMEX’s flows from drops in the Mexican crude oil basket price below the one established in the Federal Revenue Law. Implemented since 2017

• Access to liquidity sources: USD 8 billion in committed credit facilities

• Decrease in net indebtedness by 69% as compared to 2016

![Net Indebtedness Chart]

- Net indebtedness for 2017 was used to cover only 77% of the financial deficit
- The objective for 2018 is to limit net indebtedness to the financial deficit (MXN 79.4 billion), in line with the Business Plan
Content

1. PEMEX Snapshot
2. Upstream
3. Midstream & Downstream
4. Financial Performance
Upstream: Current Status and Challenges

- PEMEX continues to be a key player in the O&G industry
- Production has been stabilized and will eventually increase

Crude Oil Production

1. Only Ku-Maloob-Zaap
2. 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**
(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**
(USD / boe)

- Figures in nominal values Source: 20-F Form (2010-2016)
- Source: Annual Reports and SEC Reports 2016
Upstream: New Production Frontiers

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

Deepwater Infrastructure¹

Shale Potential²

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¹ Source: National Geographic
² 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.

**Business Plan Scenario**

• Concentrates on assignments that are profitable after taxes

**Improved Scenario**

• Aggressive farm-out program
• **Updated Business Plan will include new service contracts**
• 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

**Crude Oil Production**

<table>
<thead>
<tr>
<th>Year</th>
<th>Improved (Business Plan)</th>
<th>PEMEX production</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>2,610</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>2,577</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>2,533</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>2,548</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>2,522</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>2,429</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>2,267</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>2,154</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>1,948</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>1,951</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>1,982</td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>2,017</td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td>2,141</td>
<td></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: PEMEX’s Results in CNH’s Rounds**

- PEMEX is developing projects through joint ventures and associations to share investments and risks, obtain technology, know-how and improvements within the upstream division
- PEMEX efficiently bids for each block it competes in, prioritizing revenue over aggressive offers, sign of its deep knowledge of the Mexican hydrocarbons sector

<table>
<thead>
<tr>
<th>Areas</th>
<th>Perdido Area Block 3</th>
<th>Tampico Misantla Block 2</th>
<th>Southeastern Basins Block 8</th>
<th>Perdido Area Block 2</th>
<th>Perdido Area Block 5</th>
<th>Cordilleras Mexicanas Block 18</th>
<th>Cuenca Salina Block 22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner(s)</td>
<td>Chevron &amp; INPEX</td>
<td>Deutsche Erdoel AG</td>
<td>Ecopetrol</td>
<td>Shell</td>
<td>-</td>
<td>-</td>
<td>Chevron &amp; INPEX</td>
</tr>
<tr>
<td>Prospective Resources(^1)</td>
<td>485</td>
<td>681</td>
<td>413</td>
<td>76</td>
<td>252</td>
<td>412</td>
<td>101</td>
</tr>
<tr>
<td>Type of Hydrocarbon</td>
<td>Light crude oil</td>
<td>Light crude oil &amp; dry gas</td>
<td>Light crude oil</td>
<td>Light crude oil</td>
<td>Light crude oil</td>
<td>Wet &amp; dry gas</td>
<td>Heavy crude oil</td>
</tr>
<tr>
<td>Type of Field</td>
<td>Deep waters</td>
<td>Shallow waters</td>
<td>Shallow waters</td>
<td>Deep Waters</td>
<td>Deep Waters</td>
<td>Deep Waters</td>
<td>Deep Waters</td>
</tr>
<tr>
<td>Bidding Date</td>
<td>Dec 5, 2016</td>
<td>Jun 19, 2017</td>
<td></td>
<td>Jan 31, 2018</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^1\) MMboe

**Round 2.4 results**
# Upstream: Farm-outs at a Glance

<table>
<thead>
<tr>
<th>Areas</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>Partner</td>
<td>BHP Billiton</td>
<td>Cheiron</td>
<td>Deutsche Erdoel AG</td>
<td>Will be part of a new bidding process</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3P Reserves (Mmboe)</td>
<td>485</td>
<td>93</td>
<td>54</td>
<td>1,428&lt;sup&gt;1&lt;/sup&gt;</td>
<td>466&lt;sup&gt;1&lt;/sup&gt;</td>
<td>392</td>
</tr>
<tr>
<td>Production (Mbd)</td>
<td>N.A.</td>
<td>6.3</td>
<td>5.1</td>
<td>N.A.</td>
<td>N.A.</td>
<td>N.A</td>
</tr>
<tr>
<td>Expected Investment (USD million)</td>
<td>11,000</td>
<td>1,076</td>
<td>450</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</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 crude oil</td>
<td>Light crude 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>Bidding Date</td>
<td>December 5, 2016</td>
<td>October 4, 2017</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
</tbody>
</table>

1 Source: CNH. P10 prospective resources
## Upstream: Migrations at a Glance

<table>
<thead>
<tr>
<th>Areas</th>
<th>Ek-Balam</th>
<th>Santuario &amp; El Golpe</th>
<th>Misión</th>
<th>San Ramón-Blasillo</th>
<th>Olmos</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Project</td>
<td>Migration without a partner</td>
<td>Production Sharing Contract</td>
<td>Production Sharing Contract</td>
<td>EPISC¹</td>
<td>EPISC¹</td>
</tr>
<tr>
<td>Partner</td>
<td>N.A.</td>
<td>Petrofac</td>
<td>Tecpetrol &amp; Grupo R</td>
<td>TBD</td>
<td>Lewis Energy</td>
</tr>
<tr>
<td>3P Reserves (Mmboe)</td>
<td>500</td>
<td>126</td>
<td>345</td>
<td>26.7</td>
<td>0.6</td>
</tr>
<tr>
<td>Production (Mbd)</td>
<td>34.1</td>
<td>6.8</td>
<td>59.6 (MMcfd)</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>Expected Investment (USD million)</td>
<td>6,636</td>
<td>1,590</td>
<td>637</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>Type of Hydrocarbon</td>
<td>Heavy crude oil</td>
<td>Light oil &amp; gas associated</td>
<td>Non-associated gas &amp; condensates</td>
<td>Light crude oil &amp; dry gas</td>
<td>Light crude oil &amp; dry gas</td>
</tr>
<tr>
<td>Type of Field</td>
<td>Shallow waters</td>
<td>Onshore</td>
<td>Onshore</td>
<td>Onshore</td>
<td>Onshore</td>
</tr>
<tr>
<td>Migration Date</td>
<td>May 2, 2017</td>
<td>December 18, 2017</td>
<td>March 2, 2018</td>
<td>In process</td>
<td></td>
</tr>
</tbody>
</table>

1 EEISC: Exploration and Production Integral Services Contract (In Spanish: Contratos Integrales de Exploración y Producción)
PEMEX is increasing its portfolio in an important deep water portion of the Gulf of Mexico

1. **Trion** is the first PEMEX farm-out in deep waters:
   - BHP Billiton will invest up to USD 1.9 billion before PEMEX makes additional contributions

2. Block 3: Joint venture with Chevron & INPEX

3. Block 2: Joint venture with Shell

4. Block 5 & 18: PEMEX was awarded the block without a partner

5. PEMEX is seeking for a partner for **Nobilis-Maximino**
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 Country

<table>
<thead>
<tr>
<th>Country</th>
<th>2016 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>
</tbody>
</table>

1. Source: Strategy, PwC 2017
2. Source: Pipeline 101, Where Are Liquids Pipelines Located?
3. Source: EIA 2017
The midstream and downstream sectors have been affected due to underinvestment, impacting petroleum products output.

**PEMEX Industrial Transformation**
- Partnerships in operation of auxiliary services 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**

**Financial Balance 2025**

(Equivalent to -96.3 in 2017)

**Partnerships**

Safe and reliable operations

**36.2** Acknowledgment and efficiency in transportation costs

**41.9** Stolen Product

**11** Result

**29.4**

1 The financial balance considers the result from subtracting total expenses (including financing costs) from total revenues.
The Mexican fuels market is moving towards an open, competitive and market-driven price structure; all the country has liberalized fuel prices since November 30, 2017.

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

Stage 1.2: Northern System Border
Results will be announced in March.

Stage 2.1: Pacific System Topolobampo
Results will be announced in April.

1 At fees 10% above the minimum required.
Operating Income

- Resilience in operating income despite volatility in crude oil prices

Operating Income and Mexican Crude Oil Mix Price

1 Administrative, transportation and distribution
2 Financial information is reported under IFRS; Audited Quarterly Results, except 2017 (preliminary)
Access to Financial Markets

- **February 2017 – Issuance of EUR 4.25 billion in three tranches:**
  - EUR 1.75 billion at 2.500% due in August 2021
  - EUR 1.25 billion at 3.750% due in February 2024
  - EUR 1.25 billion at 4.875% due in February 2028

- **July 2017 – liability management transaction:**
  - Reopening of two reference bonds due in 10 and 30 years at 5.75% and 6.90%, respectively. 3x oversubscribed.
  - Repurchase of bonds totaling USD 1,739 million due in 2018 and 2019, to improve the amortization profile and increase the average debt maturity.

- **November 2017:**
  - Issuance of GBP 450 million at 3.750% due in 2025

- **February 2018 – liability management transaction:**
  - Issuance of USD 2.5 billion at 5.35% due in 2028 and USD 1.5 billion at 6.35% due in 2048
  - Repurchase of bonds totaling USD 1.8 billion due in 2019 and 2020
  - Exchange of bonds due 2044 and 2046 for the new 30 year maturity bond totaling 1.8 billion
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 December 31, 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
- Strong 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>mAAA</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 U.S. Treasuries

Source: Bloomberg
Final Remarks

PEMEX has **tackled short-term challenges** with determination and today has **stable finances**
- Compliance with the financial balance target: MXN -94 billion
- Decreased net indebtedness: MXN 72 billion
- Renewed access to financial markets and active debt management (issuance ≈ USD 14 billion)
- Sound financial footing and ensured access to liquidity (≈ USD 8 billion in committed credit facilities)
- Hedge on crude oil prices to guarantee budget stability

PEMEX has **taken advantage of the Energy Reform’s historic opportunity** with the implementation of its Business Plan:
- 3 farm outs (Trion, Ogarrio and Cárdenas-Mora)
- Alliances for non-PEMEX’s fields with major oil & gas companies (Deutsche Erdoel, Ecopetrol, Shell, Chevron, Inpex)
- Pemex Industrial Transformation’s first partnership for hydrogen supply
- Focus on the most profitable markets
- Pemex Logistics has successfully completed the first stage of the Open Season

Round 2.4 **outstanding results**:
- Expected investment of USD 93 billion, which represents 1.5x total investment of previous bidding rounds
- Increased oil production up to 1.5 MMbd