



**OPIS: Mexico-US Petroleum Summit**

# Update on Mexico's Energy Reform timeline and implications

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## Content

- **Overview of Mexico's Energy Reform**
- Update on Mexico's Energy Reform timeline and implications

# The Energy Reform was structured under a clear vision and principles that support changes toward an open market

## Mexican Reform vision and key changes across the hydrocarbon value chain

### Vision of the Reform

- New models for each segment, with the objective of reducing prices for final users:
  - Increase conventional and non conventional E&P, maintaining reserve levels
  - Improve production processes for refined and petrochemical products
  - Enhance transportation, storage, and distribution networks
- Attract foreign investment and new players to develop competitive markets
- Maintain oil resources ownership (Mex), increase fiscal income to be redistributed

#### Upstream



- Private companies participation allowed - individually or via partnership with Pemex
- New schemes available: licenses, profit or production sharing

#### Midstream



- Open access and asymmetric regulations, became key elements to open the market
- Private investments allowed for new and existing infrastructure

#### Downstream/Supply



- Private company participation allowed
- New supply sources will compete with Pemex local production and imports under asymmetric conditions

#### Wholesale & Retail











- Open competition among jobbers and retailers, leveraging existing and new supply sources
- Incremental open market and fuel price release

With the reform, Mexico adopts a multi-agency system, Pemex no longer controls the market and should act as any other player

## Hydrocarbon regulatory entities and roles

Non exhaustive

<b>Ministry of Energy</b>	 <p>SECRETARÍA DE ENERGÍA</p>	<ul style="list-style-type: none"> <li>• Develops <b>O&amp;G policy</b></li> <li>• Selects relevant <b>upstream zones</b> to be <b>bid on</b></li> <li>• Issues <b>permits</b> for <b>downstream / fuel supply</b> activities</li> </ul>
<b>Ministry of Finance</b>	 <p>SECRETARÍA DE HACIENDA Y CRÉDITO PÚBLICO</p>	<ul style="list-style-type: none"> <li>• Establishes <b>economic conditions</b> for E&amp;P contracts</li> <li>• During the transition, establishes <b>cap for maximum pump prices</b></li> <li>• Issues norms on <b>fuel quality</b></li> </ul>
<b>National Hydrocarbon Commission</b>	 <p>Comisión Nacional de Hidrocarburos</p>	<ul style="list-style-type: none"> <li>• <b>Regulates E&amp;P</b> activities</li> <li>• Prepares and executes <b>public tenders</b> of upstream zones</li> </ul>
<b>Energy Regulator</b>	 <p>COMISION REGULADORA DE ENERGÍA</p>	<ul style="list-style-type: none"> <li>• Defines <b>midstream rates</b></li> <li>• Defines <b>asymmetric regulation for Pemex</b></li> <li>• Issues <b>permits for fuels transport and sale</b></li> <li>• Defines maximum pricing formula and conditions for <b>Pemex first-hand fuel sales</b></li> </ul>
<b>Competition Authority</b>		<ul style="list-style-type: none"> <li>• Supervises industry players throughout the O&amp;G value chain to ensure <b>fair market competition</b> and identify markets in which first-hand prices can be liberalized</li> </ul>
<b>Safety and Environment Agency</b>	 <p>AGENCIA DE SEGURIDAD, ENERGÍA Y AMBIENTE</p>	<ul style="list-style-type: none"> <li>• Regulates and supervises <b>industrial/operational safety and environmental protection</b></li> <li>• Supervises <b>fuel quality</b> based on approved norms</li> </ul>
<b>Consumer Rights Protection</b>	 <p>PROCURADURÍA FEDERAL DEL CONSUMIDOR</p>	<ul style="list-style-type: none"> <li>• Protects the <b>rights</b> of the <b>end customer</b> throughout the O&amp;G value chains</li> </ul>
<b>National Natural Gas Control Center</b>	 <p>COMISION NACIONAL DE CONTROL DE GAS NATURAL</p>	<ul style="list-style-type: none"> <li>• Independently operates the <b>national natural gas transport system</b></li> </ul>

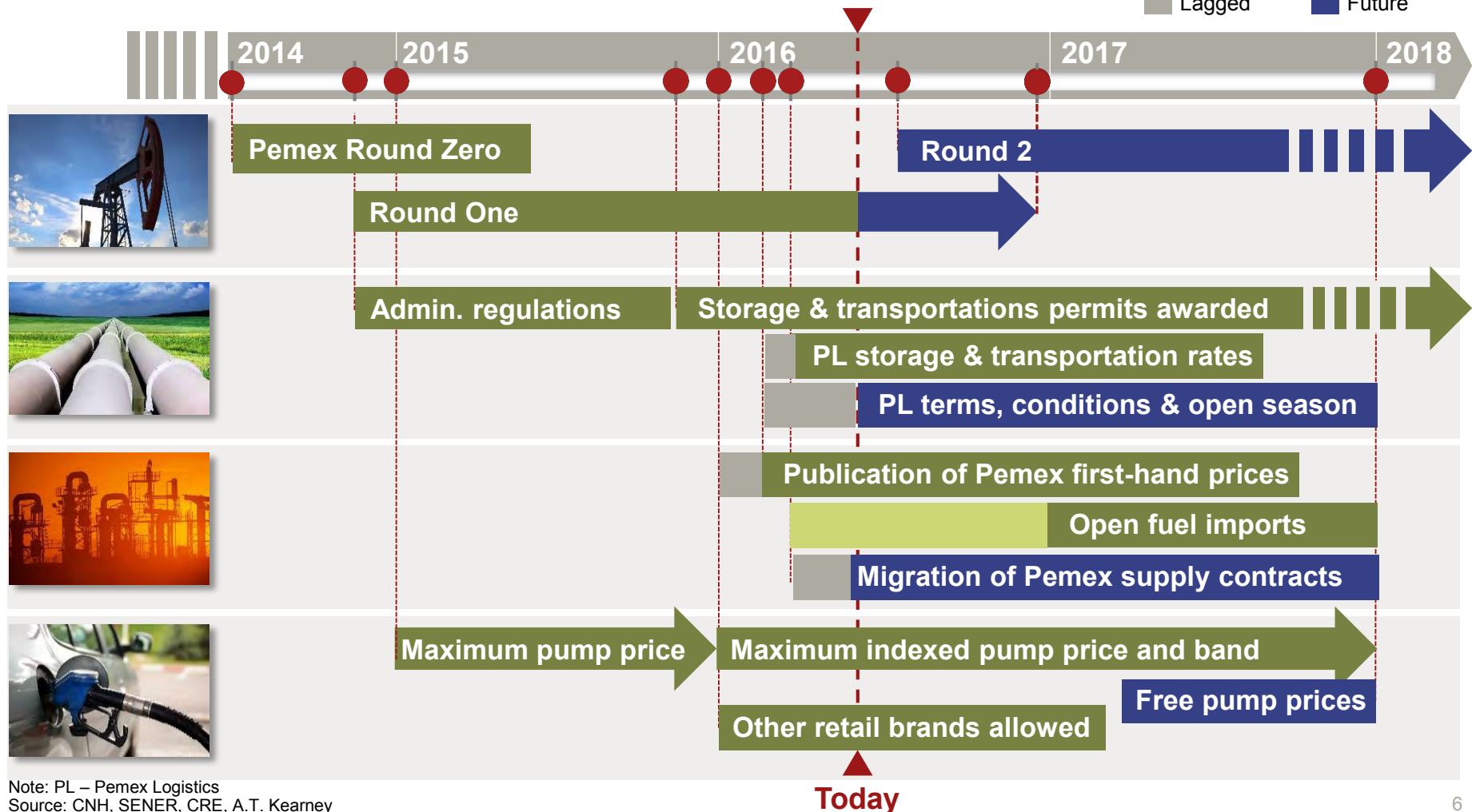
## Content

- Overview of Mexico's Energy Reform
- **Update on Mexico's Energy Reform timeline and implications**

# The Energy Reform is well underway and many of the key milestones have already occurred

## Mexico's Energy Reform summary timeline and updates





■ Advanced    ■ Completed  
■ Lagged    ■ Future



Note: PL – Pemex Logistics  
 Source: CNH, SENER, CRE, A.T. Kearney

# Several updates have occurred in 2016, yet some key elements remain to be defined

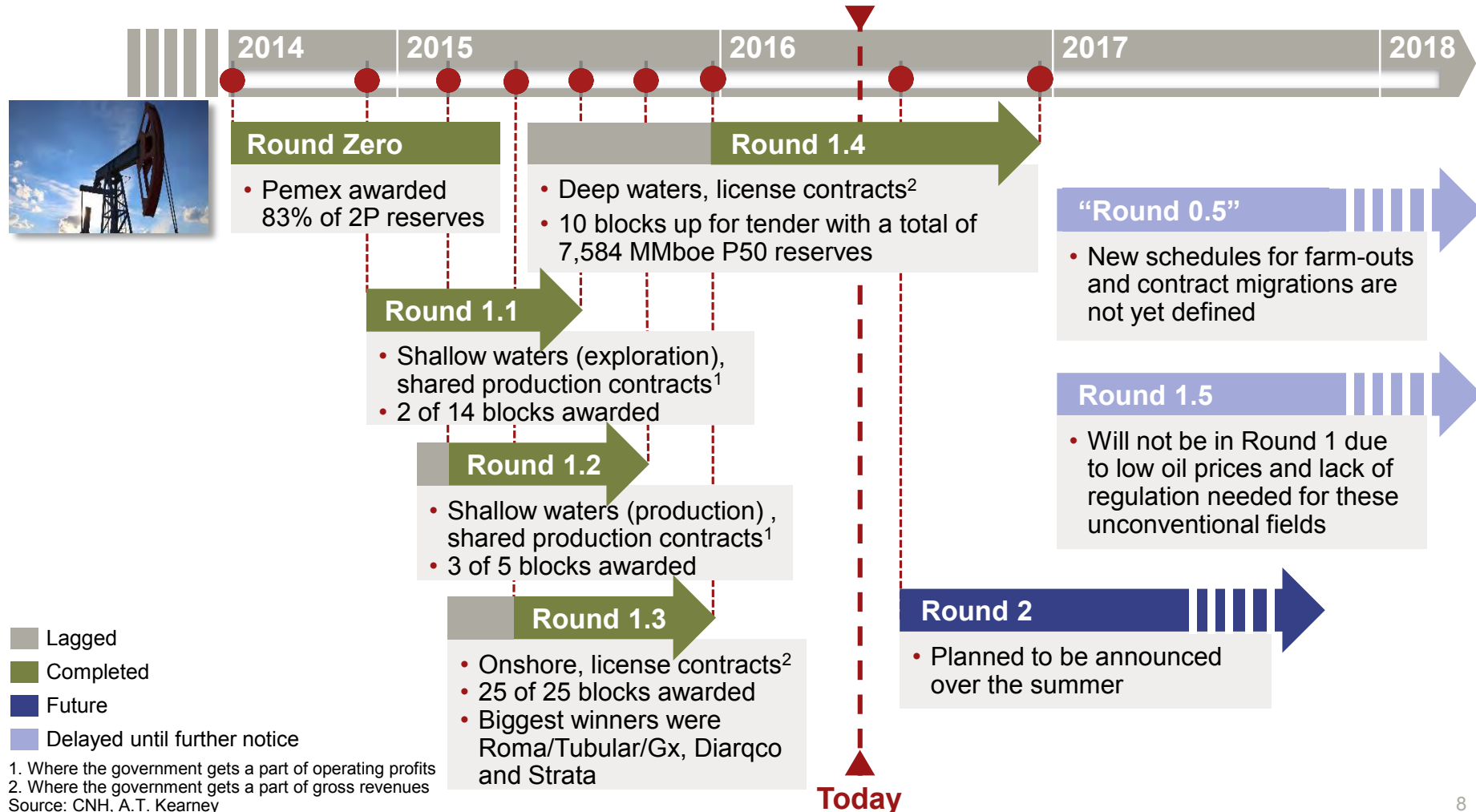
## Summary of key updates on Mexico's Energy Reform

	 <b>Upstream</b>	 <b>Midstream</b>	 <b>Downstream / Supply</b>	 <b>Wholesale &amp; Retail</b>
<b>Main 2016 updates</b>	<ul style="list-style-type: none"> <li>• Success in <b>Onshore Fields</b> bidding (Round 1.3)</li> <li>• Some players announced drilling launch of <b>Shallow Waters</b> fields for 4Q16 (Rounds 1.1 and 1.2)</li> <li>• Advance in <b>Deep Waters</b> bidding, interest from international players</li> </ul>	<ul style="list-style-type: none"> <li>• More <b>complete regulatory framework</b> defined, including integrated systems and open access</li> <li>• <b>Multiple permits</b> granted for transportation and storage</li> <li>• <b>Final rates</b> defined for Pemex Logistics (PL)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>First-hand<sup>1</sup> pricing</b> formula defined (CRE) and Pemex model of first-hand contracts already available</li> <li>• New <b>fixed tax</b> (IEPS) for gasolines and diesel</li> <li>• <b>Private imports</b> allowed</li> <li>• Pemex announcing interest in partnerships for <b>refinery reconfiguration</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Maximum indexed pump price and band</b>, currently 3% below 2015 level</li> <li>• Permits granted for <b>new retail brands</b>, including Gulf, yet no gas stations have yet switched brands</li> <li>• Aggressive <b>expansion plans</b> from existing gas station groups</li> </ul>
<b>Key elements yet to be defined</b>	<ul style="list-style-type: none"> <li>• <b>Chicontepec and Unconventional Fields</b> bidding, eliminated from Round 1</li> <li>• <b>Round 2</b> blocks, tenders and schedules</li> <li>• Dates for <b>farm-out/JV</b> tenders (Round 0.5)</li> </ul>	<ul style="list-style-type: none"> <li>• PL <b>open season</b> and consequent interest from private companies to reserve capacity in existent infrastructure</li> <li>• <b>Private investment</b> in new logistics infrastructure (no FIBRAE granted yet)</li> </ul>	<ul style="list-style-type: none"> <li>• Mandatory date for transition of existing <b>Pemex supply contracts</b></li> <li>• Effective <b>volume supplied</b> by private imports</li> <li>• Mechanisms for <b>private investment in refineries</b></li> </ul>	<ul style="list-style-type: none"> <li>• New <b>commercialization terms</b> yet to be defined by Pemex, including wholesale and retail margins with new first-hand pricing formula</li> </ul>

1. First-hand sales apply only for Pemex, at refinery gate and import ports  
 Source: SENER, CNH, CRE, sector news, A.T. Kearney

The timeline for the later tenders of Round 1 slipped, while the unconventional fields tender has been removed from Round 1

Upstream planned and actual timeline





Although the onshore fields tender was successful in awarding all 25 blocks, 6 had to be relinquished

## Upstream 2016 updates and elements yet to be defined

### 2016 Updates

- Sierra/Talos/Premier, winners from Round 1.1, and Petrobal/Fieldwood, winners from Round 1.2, have announced they **expect to drill their first wells by Q4 2016** (Shallow waters)
- Three out of the 14 participants who won 6 of the 25 blocks awarded for the Round 1.3 tender (Onshore fields) were **unable to sign the contracts**:
  - Geo Estratos, Strata and Sarreal did not present the necessary credit guarantees to prove their financial solvency
  - Second place bidders (Conequipos, Lifting, Renaissance, Steel Serv, Strata and Tonalli) are now awarded the blocks, but if they in turn fail to sign, the blocks are voided and moved on to later rounds
- Round 1.4 (Deep waters) is **in process**

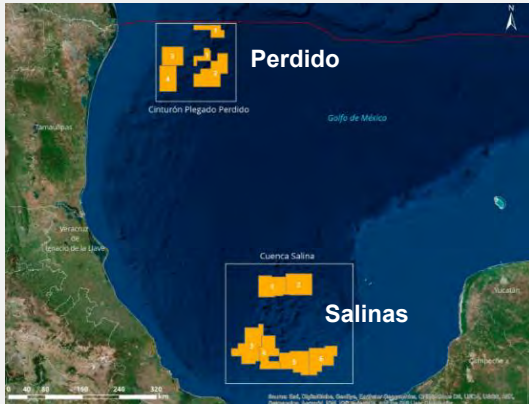
### Elements yet to be defined

- Round 1.5 (Unconventional fields) was **postponed until further notice**
- Round 2 should be **announced around June/July 2016**, when the details of tenders, blocks and schedules will be revealed; two tenders are expected to be launched at first
- It is expected that Pemex will soon reveal the dates for the **farm-out/JV tenders** (part of “Round 0.5”)
- **Contract migrations** are also expected to happen, however specific dates are not yet known (also part of “Round 0.5”)

Round 1.4 has generated interest of several large players, most of which have relevant experience operating deep water wells

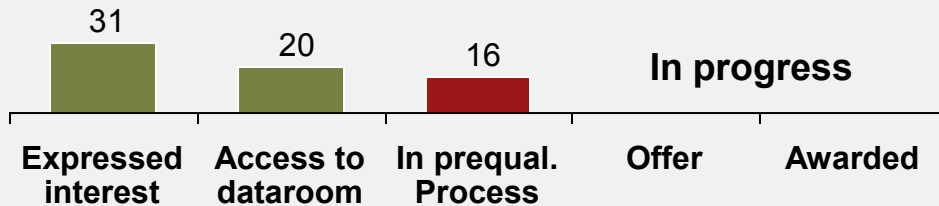
### Round 1.4 (Deep Waters) overview and progress

#### Resources



- 10 blocks in total, 4 located in the Perdido area and 6 in the Saline Basin
- P50 resources ranging from 262 to 1,214 MMboe per block (total=2,736 MMboe in Perdido and 4,848 in Salinas)
- Based on previous results, larger blocks might result in greater interest from bidders

#### Participants (No.)



Pre Qualified <sup>1</sup>	Deep Water?	DW Gulf of Mexico?
Atlantic Rim	✓	✓
BHP Billiton	✓	✓
BP Exploration	✓	✓
Chevron	✓	✓
CNOOC	✓	✗
ExxonMobil	✓	✓
Hess	✓	✓
Inpex	✓	✓
Noble	✓	✓
Petronas	✓	✗
Pemex	✓ <sup>2</sup>	✓
Ophir	✓	✗
Shell	✓	✓
Sierra	✗	✗
Statoil	✓	✓
Total	✓	✓

1. In order to qualify for bidding as operators, companies will have to accredit experience in at least one E&/orP project in 1,000m depth  
 2. Though Pemex has deep water wells, they are exploratory and not yet producing  
 Source: CNH, A.T. Kearney analysis

Upstream challenges will depend on the success of the latest tender, and the uncertainty in the release of further rounds

## Main challenges ahead in Upstream

### Results of Round 1.4 (Deep-Water)

- The amount of players interested, and most importantly those who ultimately bid for blocks in the Deep Water round will provide an indication of future potential for these assets

### Schedule for Round 2

- By releasing the first two tenders containing Shallow Water and Onshore blocks, the momentum from the moderate success of recent tenders could be continued without allowing the delays that occurred in Round 1

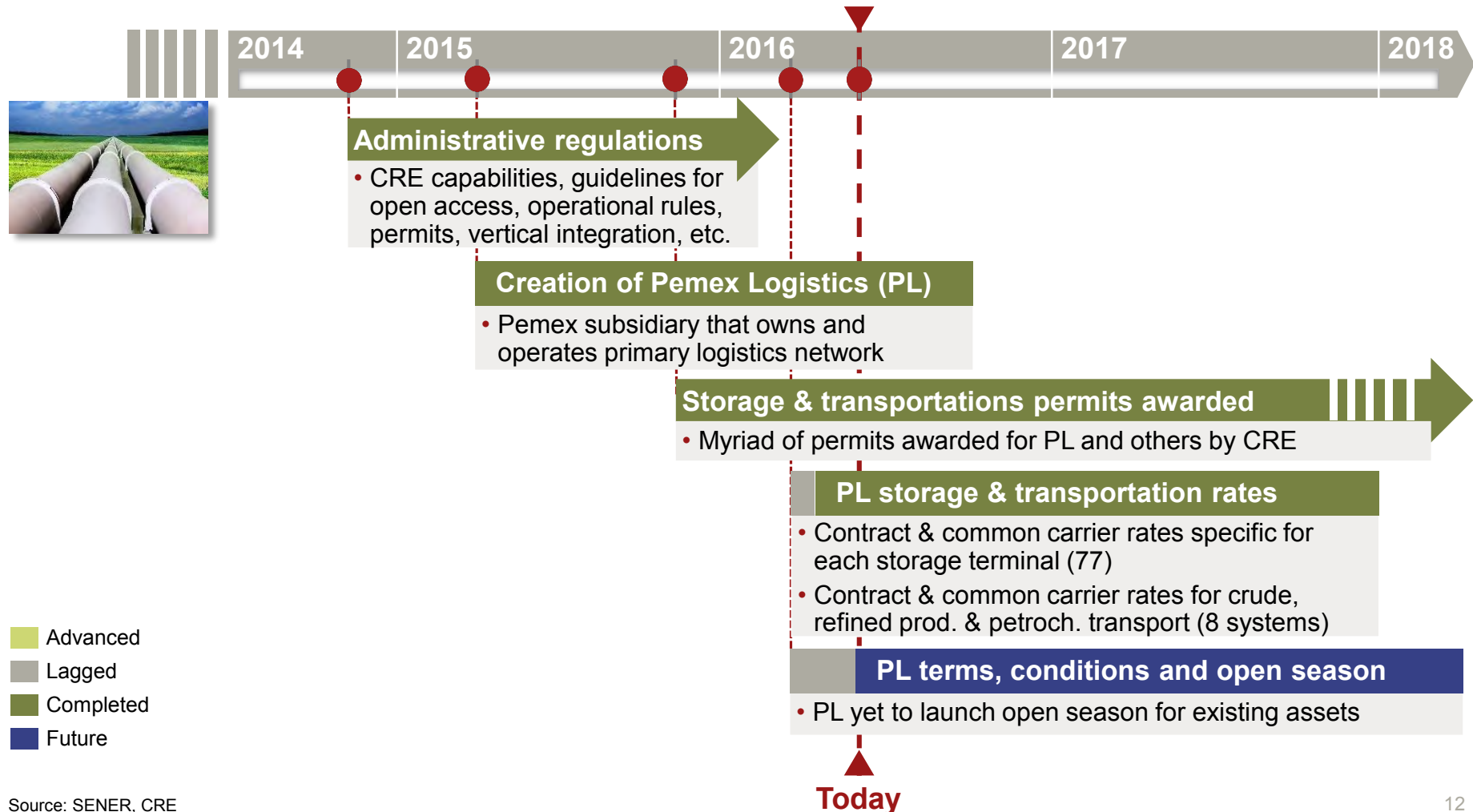
### Schedule for farm-outs and migrations

- Both farm-outs and contract migrations have been severely delayed
- Moving forward with these two schemes will not only help Pemex in working with these assets, but also recover some of the lost production

**Without successful results and a prompt release of other rounds, the success of the Reform in Upstream will be in question**

With a complete regulatory framework, Pemex Logistics' open season is gauging interest from third parties importing products

Midstream planned and actual timeline



Despite of good progress at regulations and tariffs, there are still multiple areas where progress is expected in the near future

## Midstream 2016 updates and elements yet to be defined

### 2016 Updates

- Administrative regulation published by CRE **already operational**, highlights include:
  - Open access rules, asymmetric conditions for Pemex, vertical integration constraints
  - Mix between **contract vs common carrier** per asset, under a minimum 10% common
- CRE begun **processing permits** for storage and transportation:
  - **Pemex Logistics** (PL) owns the majority of transportation and storage permits (crude & refined products), except for jet fuel storage permits (ASA), tanker car (rail companies), and tanker truck transportation (various)
- **Storage and transportation tariffs** for Pemex assets approved and published by CRE

### Elements yet to be defined

- PL **terms and conditions** for service providing have not yet been published by CRE
- PL **open season** for storage and transportation has not yet been announced
- PL **quarterly statistics** regarding refined products storage, transportation and distribution expected to be published May-June
- Pemex's former and current CEO have announced **collaboration with third parties** for development / operation of infrastructure:
  - None have yet been consolidated
  - FIBRAE has not yet been used as a monetization mechanism
- Possibility for “**integrated systems**” to be developed based on existing infrastructure permits (including storage)

Except for a few cases, uncertainties around Midstream are still preventing relevant investments from private companies

## Changes in competitive landscape<sup>1</sup>



### Transportation

- **Three private** refined products projects:



“Dos Aguilas” 287 mi, 12-in, 72Mbpd pipeline connecting Corpus Christi with Santa Catarina



“Tuxpan-Tula” ~150 mi, 18-in, 165Mbpd pipeline



“Tuxpan-Tula” pipeline

- Pemex has **projects on its own** (e.g. Peninsular)
- No major changes for **current infrastructure**:
  - Crude pipelines owned by PL<sup>2</sup>
  - Refined product pipelines owned by PL grouped in 6 permits adding up approximately 14,400 mi



### Storage

- **Two private** refined products projects:



4 storage terminals: 2 located close to Monterrey, 1 at San Luis Potosí and 1 close to Tula



Hydrocarbons and petrochemicals terminal del Centro de México, at San Luis Potosí, 300 Mb capacity<sup>3</sup>

- No major changes for **current infrastructure**:
  - PL owns 77 refined products storage terminals
  - ASA owns 60 jet fuel storage terminals
  - PL has 1 permit for crude storage at Pajaritos

**FIBRA E, an investment vehicle to attract new partners leveraging Pemex’s existing assets, has not yet been used**

1. Announced projects are still subject to approval, construction will also depend on their open season’s results  
 2. Pemex E&P owns one permit and will own recollection crude pipelines  
 3. Alliance formed by Watco Companies, Kansas City Southern México, and WTC Industrial Park  
 Source: CRE, company websites

Midstream operations under an open market will be tested soon, the outcome will affect competition along the value chain

## Main challenges ahead in Midstream

### Results of Pemex's open season

- Contract carrier vs common carrier reserved capacity should enable commercialization of refined products and downstream competition
- Third parties can ask Pemex TRI to give up previously reserved capacity under contract carrier, effectively having priority to transport their products

### Theft of refined products

- Current regulation deems responsibility of stolen product on the logistics company and approved rates include a fee for crime prevention, yet it still needs to be confirmed whether this fee is sufficient

### Regulation preventing vertical integration

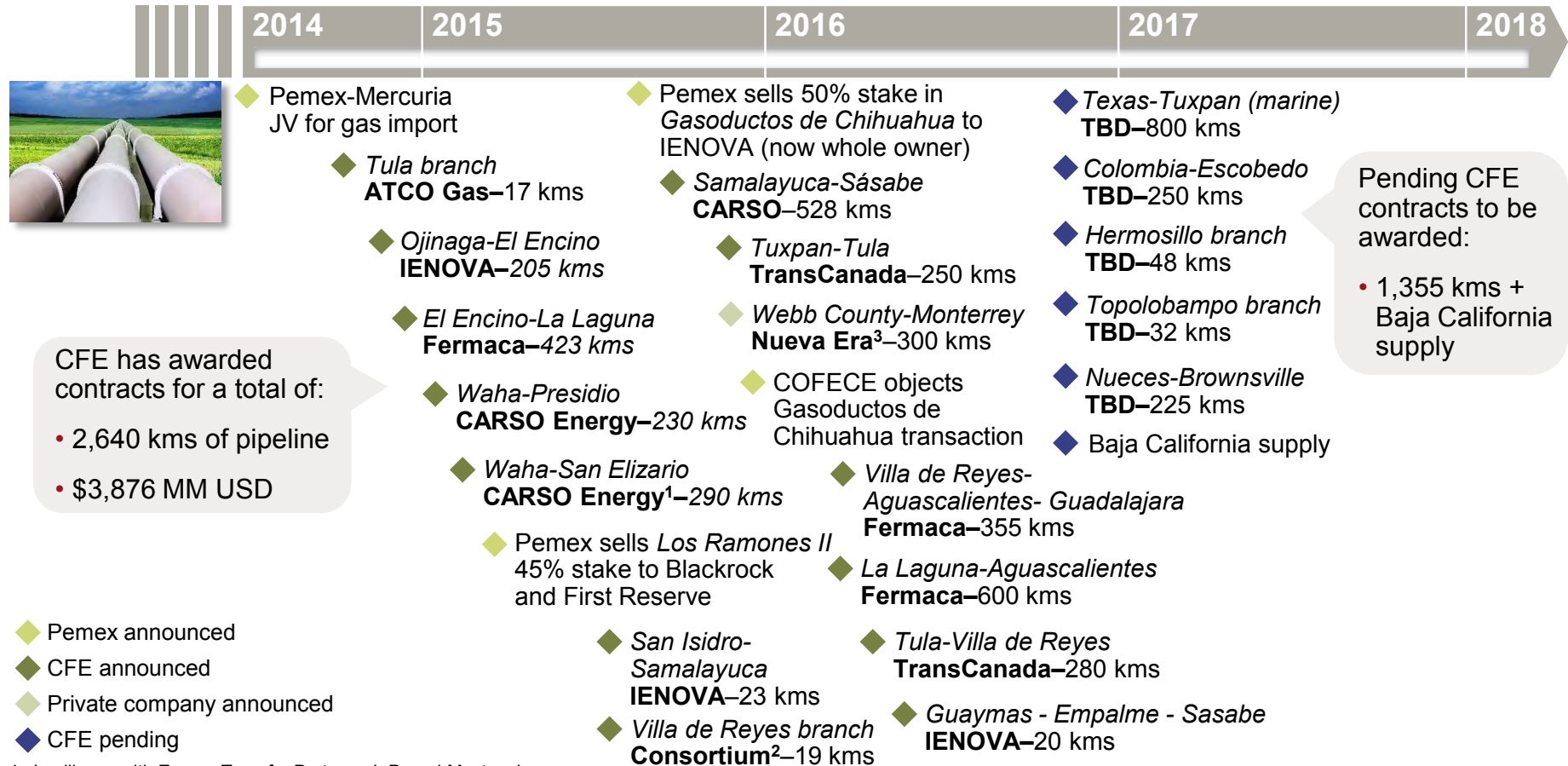
- Vertical integration is not allowed<sup>1</sup>, therefore new entrants should be independent logistics companies who transport and store refined products
- Integrated companies and traders should decide between commercialization and logistics

### New logistics infrastructure development

- Additional investments are needed for the network and storage capacity
- New infrastructure requires “offtakers” willing to aggregate demand and contract capacity on medium-long term

# As opposed to Oil, private participation in Natural Gas pipelines has materialized with CFE awarding 12 out of 18 projects

## Natural Gas Midstream projects evolution



CFE has awarded contracts for a total of:

- 2,640 kms of pipeline
- \$3,876 MM USD

Pending CFE contracts to be awarded:

- 1,355 kms + Baja California supply

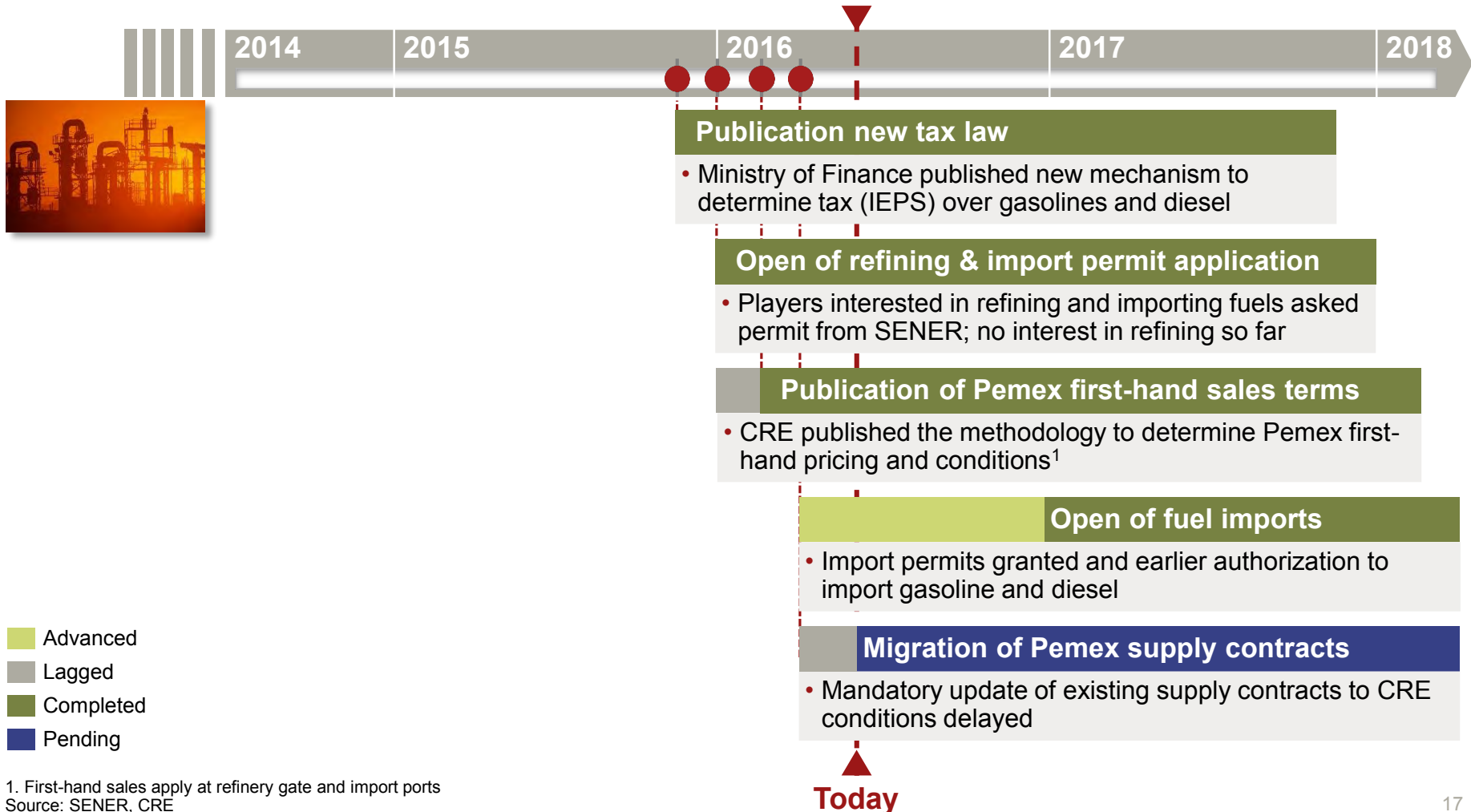
- ◆ Pemex announced
- ◆ CFE announced
- ◆ Private company announced
- ◆ CFE pending

1. In alliance with Energy Transfer Partners, L.P. and Mastec, Inc.  
 2. Transportadora de Gas Natural de Zacatecas, Distribuidora de Gas Natural México, Distribuidora de Gas Natural del Noroeste, Gas Natural Industrial and Gas Natural del Noroeste  
 3. Nueva Era Pipeline is a JV between Howard Energy and Clisa  
 Source: CFE, company websites



# In Downstream/Supply, opening of private imports was advanced and Pemex first-hand prices and terms defined

## Downstream / Supply planned and actual timeline



1. First-hand sales apply at refinery gate and import ports  
Source: SENER, CRE

Yet, update of existing supply contracts has been delayed due to the necessary disruption of gas stations current margin scheme

## Downstream / Supply 2016 updates and elements yet to be defined

### 2016 Updates

- **New tax (IEPS) mechanism** setting up a fixed tax in pesos / liter for gasolines and diesel was revised early 2016, granting a **fiscal stimulus** for gasolines
- The regulation determining **Pemex first-hand sales<sup>1</sup> prices and conditions** was published:
  - Although previous drafts defined CRE's ability to limit **market share of dominant players**, this is not mentioned in final version
  - Pemex has already published updated models of its **first-hand sale contracts**
- Approximately **70 players** are already authorized to import gasolines and diesel

### Elements yet to be defined

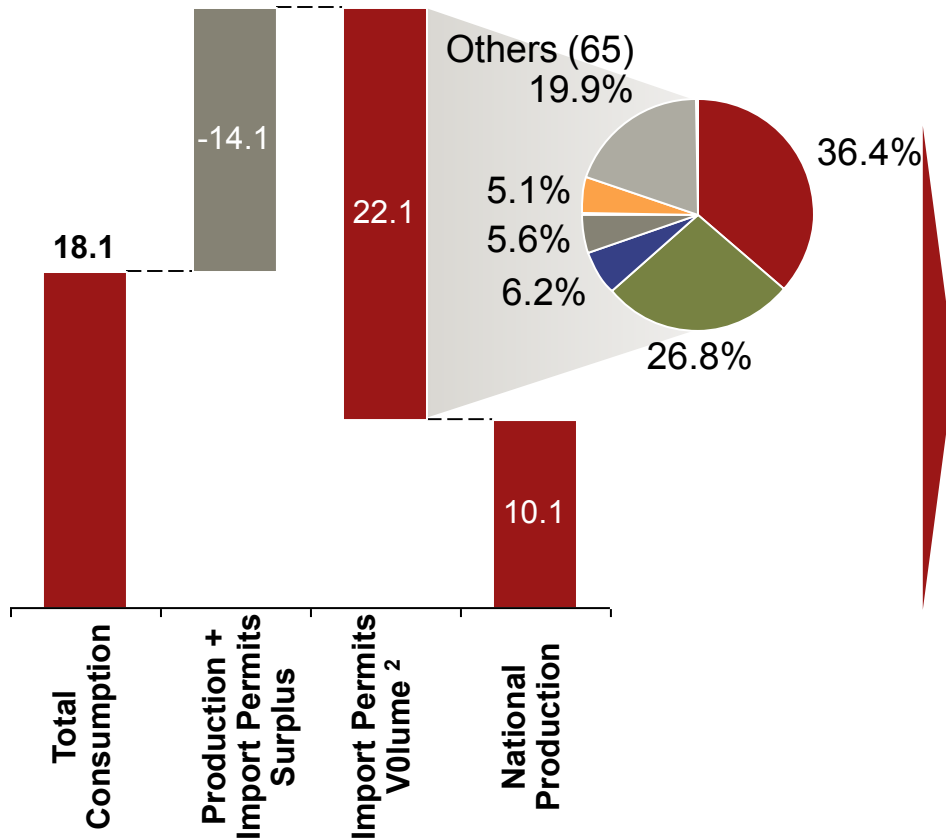
- Deadline for **mandatory update of existing Pemex supply contracts**, based on new first-hand price formula plus additional services, has not yet been defined:
  - Currently gas stations enjoy a fixed margin of 6.5% of public price, determined by the Ministry of Finance
  - Different calculation methodologies between maximum public price and first-hand price might result in different wholesale and retail margins per region
  - Profitability of existing players might change under new pricing conditions

**Additionally in Supply, Pemex recently announced that it is seeking partners to invest in and operate Mexican refineries, considering sale of majority shares**

Import permits combined account for over 120% of national demand, which if fulfilled would saturate the market

**National gasoline & diesel demand vs. granted import permits**

2015, Billions of Gallons



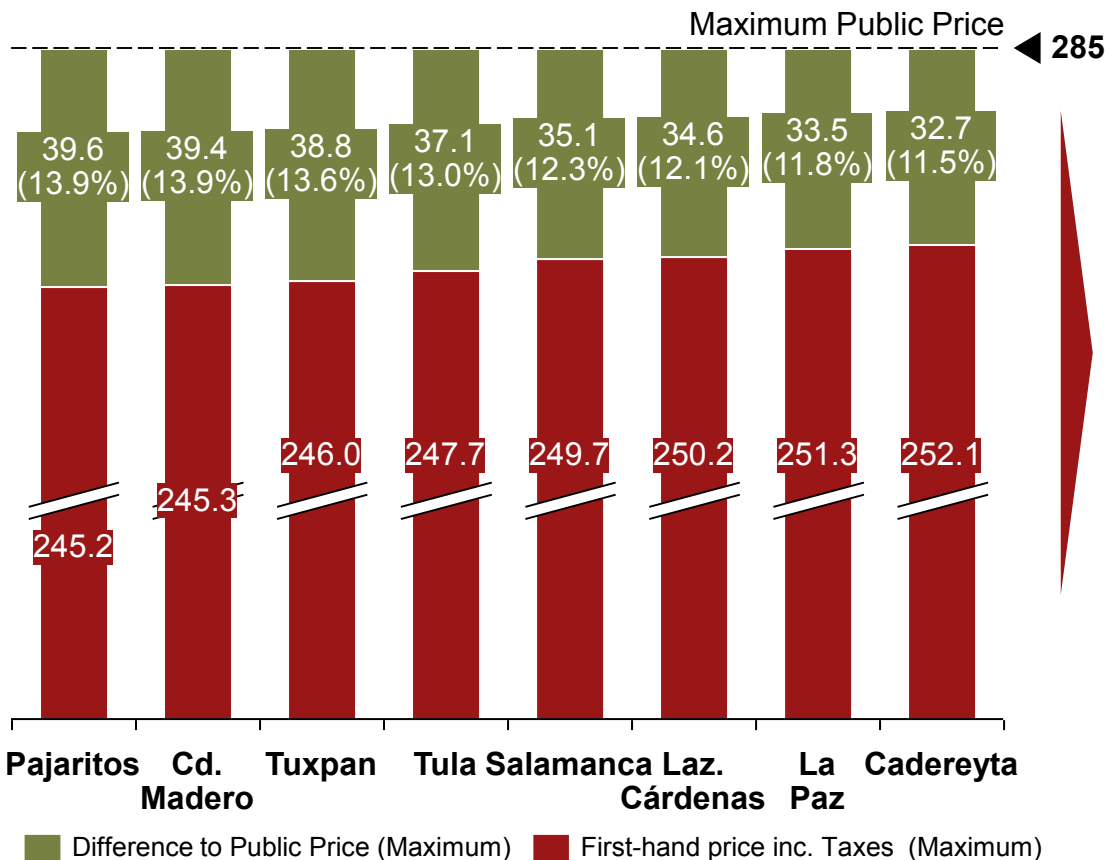
Company	Comments
<b>IF Vertical 2</b>	Owned by Gulf Oil International Group, a major global oil company owned by the Hinduja Group
<b>Puma Energy</b>	Owned by Trafigura and Sonangol Group, Angola's NOC
<b>Grupo IDEH</b>	Ownership not revealed, founded in Mexico
<b>Trafigura</b>	One of the world's leading international commodity traders
<b>Koch Supply &amp; Trading</b>	Owned by Koch Industries, the 2 <sup>nd</sup> largest privately held company in the US

1. Aggregate amount for permitted imports. not necessarily equal to total imports. 2. Import permits for 2016  
Source: SENER

# Regional differences in first-hand prices will imply different wholesale and retail margins if pump price remains capped

## First-hand price vs. Public price in selected locations

April 2016, USD cents per gallon, gasoline 87 oct.



### Other costs and margins along the value chain

- Difference to public price cap must accommodate all other activities along the value chain: primary transport, storage, commercialization, distribution and retail, and respective taxes

### Pemex first-hand price construction

- Applies at refineries and import ports
- General net price formula implies:
  - USGC price references
  - Quality adjustments and import logistics costs from USGC
  - Monthly calculation
- Taxes apply (IEPS, VAT, fossil fuel quota and federal quota)

Note: Exchange rate considered 1 USD=17.49 MXN  
 Source: PEMEX TRI website, DOF (*Diario Oficial de la Federación*), A.T. Kearney analysis

# Coexistence of different pricing schemes until 2018 is the key challenge for new players entering in Supply

## Main challenges ahead in Downstream / Supply

### Pressure of imports on local production and logistics

- High import volumes requested through permits advance future pressure on domestic production, which will require higher efficiency to compete
- Private imports will depend on the ability to use existing logistics network

### Different first-hand and pump price schemes

- Until 2018, the Ministry of Finance will keep on setting a cap on pump prices, which may limit wholesale and retail margins in certain regions
- Shift in mix of imported/national product might impact first-hand price levels

### Local distortions due to single first-hand price reference

- Given that Pemex first-hand price will use USGC as reference for the whole territory, local market distortions in Northern Pacific and Central North border regions may appear

### Historical margin security of gas station owners

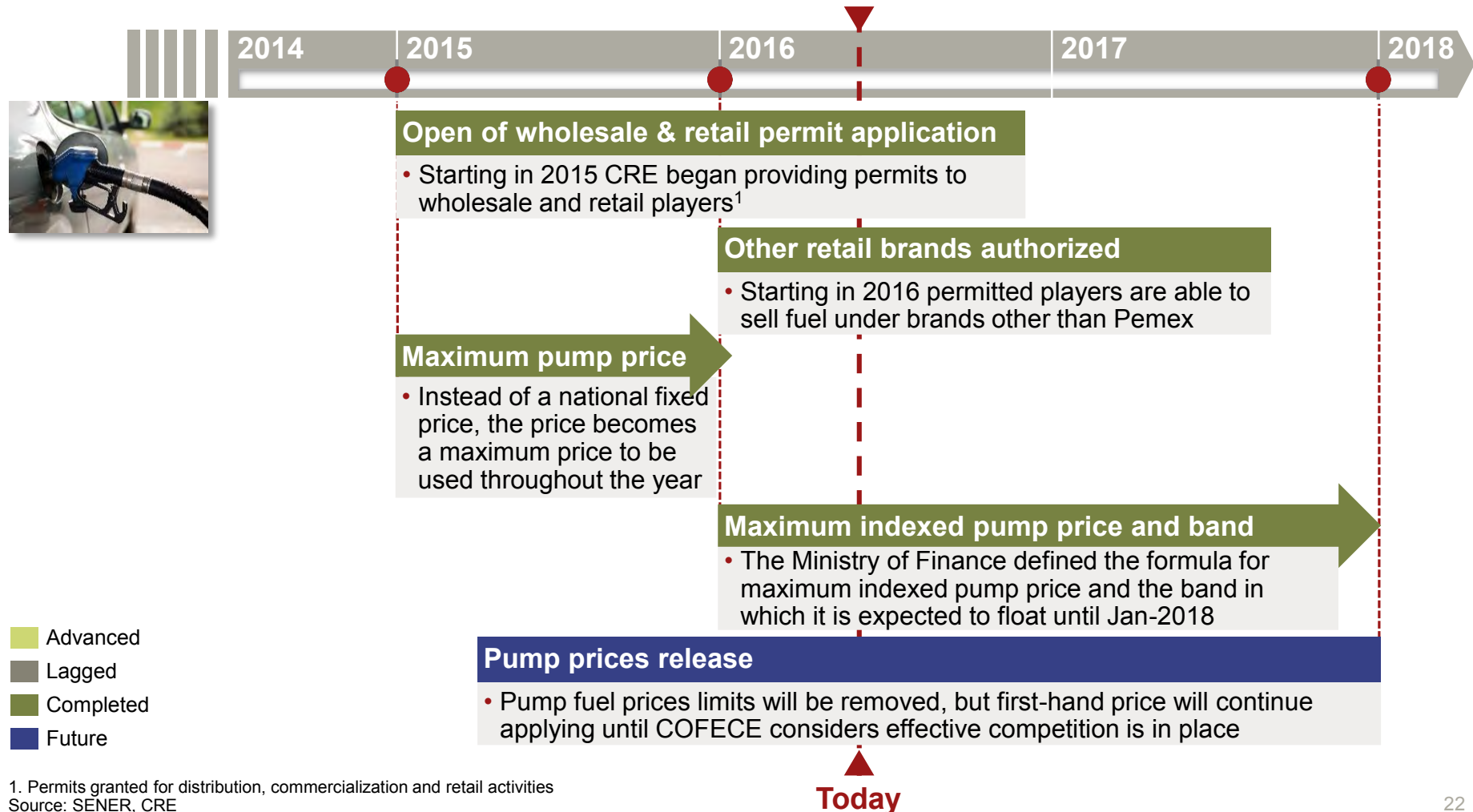
- While current supply contracts prevail between Pemex and gas station owners, guaranteeing fixed margins, it will be more difficult for alternative suppliers to capture clients with open-market pricing schemes

### Price volatility derived from monthly update frequency

- Pemex first-hand and national pump prices are calculated on monthly basis which will require hedging mechanisms from alternative suppliers to accommodate international pricing volatility

In Wholesale & Retail, timeline for key milestones has remained as planned; next milestone is pump price release in 2018

Wholesale / Retail planned and actual timeline



Despite market opening to new retail brands and pump price discounts, the majority of gas stations still maintains status-quo

## Wholesale & Retail 2016 updates and elements yet to be defined

### 2016 Updates

- **Multiple distribution permits** granted by CRE (~1500), retail permits granted for similar number of existing gas stations (~11,000)
- Only one foreign player has announced retail under a new brand (Gulf) and **no gas stations have yet switched brands**
- Existing large gas station groups have announced **aggressive expansion plans**, and increasingly display elements of their own brands along with Pemex branding (e.g. G500)
- First-hand regulation **established flexibility** for wholesalers and gas stations to terminate Pemex supply contracts (30-days notice)
- Maximum pump price updated monthly inside predefined band, yet has **remained all year at minimum**; only gas stations in border areas have experimented with price movements

### Elements yet to be defined

- COFECE sanctioned Pemex for **cross-selling of supply and distribution** to gas stations, Pemex paid the penalty, but impugned the resolution which is still under judgment by the Supreme Court
- New **Pemex commercialization terms** have not yet been published, including **new gross margin scheme** for wholesalers and gas stations, which is crucial for new suppliers to determine market attractiveness
- Due to current contamination issues across Mexico metropolitan areas, there is a recent **public consultation to review fuel quality specs** recently published

# Although only one new brand has confirmed operations, existing retail groups are announcing expansion plans

## Recent movements of retail brands

### Current players

**Gas station group threatens to break with Pemex (03/04/16)<sup>1</sup>**

The gas station group G500 gave an ultimatum to Pemex, asking to improve their service quality schemes and offer better prices, or they would start seeking new partners

**Free gasoline imports invite companies to compete against Pemex (03/22/16)<sup>1</sup>**

Taking advantage of energy sector's opening, Femsa added gas stations to its business model, by acquiring 227 of them, with whom it had an agreement to operate its Oxxo convenience stores



**The Monterrey-based Petrorack will import gasoline (04/21/16)<sup>1</sup>**

In an unparalleled move in the national energy sector's history, Petrorack became the 1<sup>st</sup> company in Nuevo Leon to obtain a permit to import gasoline and diesel. Petrorack plans to invest 30 million pesos to enlarge its facilities

### New players

**Mexico: Gulf Oil to operate 2,000 gas stations in 3 years (04/18/16)**



Gulf has quickly got ahead with ambitious plans that start by opening 100 new service stations this year. The American oil company has set itself a ceiling of a 25% market share, while its target for the near future is to control 17% of the country's fuel retailing market – around 2,000 gas stations

**Puma Energy to enter petrol station market (10/14/15)<sup>1</sup>**

Oil company Puma Energy, based in Singapore, has recognized its interest in installing petrol stations in Mexico. The firm is currently assessing the options that the opening of the market will bring to foreign providers. Puma, which operates 1,247 petrol stations in Guatemala, Colombia, Paraguay, Honduras and Puerto Rico, will position in the market by offering added-value products, since its prices stand within average levels in the region



1. Translated from Spanish  
Source: El Financiero, El Sol de Mexico, Excelsior, Market Watch, Petrol Plaza



# New entrants/associations in retail will have to prove reliability in supply and prices to compete with the incumbent

## Main challenges ahead in Wholesale & Retail

### Differentiation of retail brand value propositions

- Consumers and gas station owners might be reluctant in experimenting with new brands; strong communication of differentiators is prone to accelerate adoption

### Development of independent distributors

- Independent distributors will compete with Pemex Logistics' high coverage network; since last-mile tariffs are not regulated they can take advantage from lowering prices to capture new clients

### Reliability of new sources of supply

- New brands and associations will have to prove reliability in supply and competitive pricing schemes to be able to convert existing Pemex franchises; understanding of new Pemex commercialization terms is crucial

### National price cap on pump prices until 2018

- Until 2018, the Ministry of Finance will keep on setting a cap on pump prices, which increases the risk of switching supply in regions with higher supply costs

**Similar challenges apply to Pemex as the market becomes more sophisticated, with consumers and gas stations demanding a stronger value proposition**

Looking forward, the key upcoming challenges are bound to shape the future state of the industry

### Key upcoming challenges



- **Upstream:** results of future biddings, interest and proposals competitiveness from experienced players and impact in order to reactivate the industry



- **Midstream:** projects development by private companies competing with PL, reserved capacity from importers seeking to commercialize products



- **Downstream/Supply:** Pressure from imports on local production, imported/ local product mix impact on prices, first-hand and public price schemes



- **Wholesale & Retail:** Conditions and prices to transition to new supply sources, interest in new brands, pump price release in 2018

If interested in further discussing these topics, don't hesitate to reach out:

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