Mexico Energy Opportunities: The Next Six Years

Presented by

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Houston, Texas
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Background

Pemex

- **Pemex (Petróleos Mexicanos)**
- Decentralized entity of Mexican Federal Government created in July 1938
  - 34th largest corporation in world
  - 8th biggest oil company in world
- **Principal Subsidiaries**
  - **Pemex E&P (Pemex-Exploración y Producción) -** Exploration, Production, Transportation and Production of Hydrocarbons
  - **Pemex Refining (Pemex-Refinación) -** Refines Petroleum products and derivatives that may be used as basic industrial raw materials and stores, transports, distributes, and markets these products and derivatives
  - **Pemex Gas (Pemex-Gas y Petroquímica Básica) -** Processes natural gas, natural gas liquids and derivatives, transportation and storage
  - **PPQ (Pemex-Petroquímica; Pemex Petrochemicals)** Industrial Petrochemical Processes
- **2008 Reform ("Energy Reform")**
  - Corporate Governance and Budgetary Regime (autonomy)
  - New Contracting Regime; **however**; incorporated new restrictions as to compensation and rights of contractors
  - Renewable Energy - Pemex need to promote production of renewable fuels

Crude Oil Production and Reserves

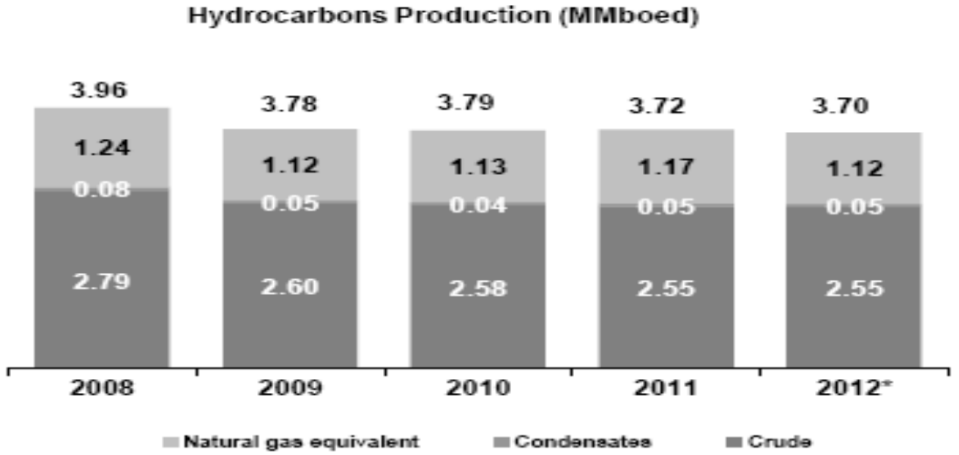
Production in 2012

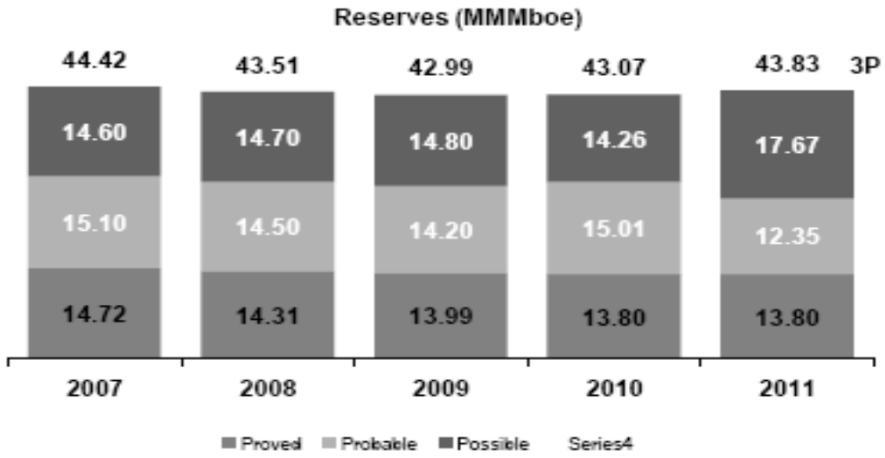
- Oil and Gas Production (MMboed) 3.70
- Crude Oil Production (MMbd) 2.55
- Natural Gas Production (MMMcfd) 6.38

Reserves in (MMMboe) in 2012

- Proved Reserves 13.810
- 1P Reserves 13.810
- Probable Reserves 12.353
- 2P Reserves 26.163
- Possible Reserves 17.674
- 3P Reserves 43.837

- **1P reserves** totaled 13.81(MMMboe), which corresponds to a average life of 10.2 years
- **2P reserves** totaled 26.2 (MMMboe), which corresponds to a average life of 19.3 years
- **3P reserves** replacement rate was 107.6%, primarily due to new discoveries. Average life of 3P reserves is equal to 32.3 years





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Crude Oil Production and Reserves (cont'd)

PEMEX® Reserves and prospective resources

Reserves by basin
As of 1st Jan. 2012

Billion bcoe

Basin	3P	2P	1P
Burgos y Sabinas	0.8	0.6	0.4
Deep waters	0.7	0.2	0.1
Sureste	24.4	18.2	12.1
Tampico–Misantla (ATG)	17.7	7.0	1.0
Veracruz	0.2	0.2	0.2
Total[1]	**43.8**	**26.2**	**13.8**
Equivalente a (años de producción)[1]	**32.3**	**19.3**	**10.2**

Prospective resources

Basin	Billion bcoe
Burgos	2.9
Deep waters	26.6
Sabinas	0.4
Sureste	20.1
Tampico-Misantla (ATG)	2.5
Veracruz	1.6
Yucatan Platform	0.5
Total[1]	**54.6**

■ Proven reserves equal 10 years current production

Source: The Petrolum Industry:Global overview and Pemex's Prespective, March 2012 http://www.ri.pemex.com/index.cfm?action=content&sectionID=25&catID=12703

Crude Oil Production and Reserves (cont'd)

Proved Hydrocarbon Reserves (1P)

- **Developed Reserves -** 66% of proved reserves are categorized as
- **Undeveloped Reserves -** 34% of proved reserves are categorized as
- **Replacement Ratio -** 101.1% reserves reached in 2012 (1P) / 107.6% reserves in 2012 (3P)
- **Oil -** 73% of reserves
  - 61% is heavy oil
  - 28% is light oil
  - 11% is extra-light oil
- **Natural Gas -** 27% of reserves
  - 63% is associated gas
  - 37% is non-associated gas
- **Location**
  - 60% located in offshore fields (shallow waters), and
  - 40% are located in onshore fields

Source: Pemex Hydrocarbon Reserves Report as of January 1, 2012

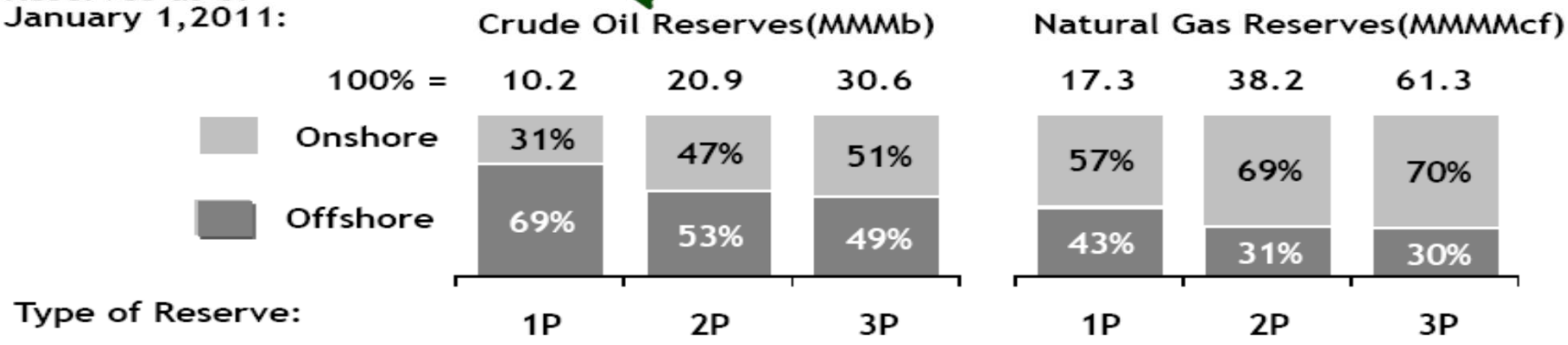
Crude Oil Production and Reserves (cont'd)

Geographical Distribution of Reserves

Basins

- Sabinas
- Burgos
- Tampico - Misantla
- Veracruz
- Sureste
- Golfo de México Profundo
- Plataforma de Yucatán

Reserves as of January 1,2011:

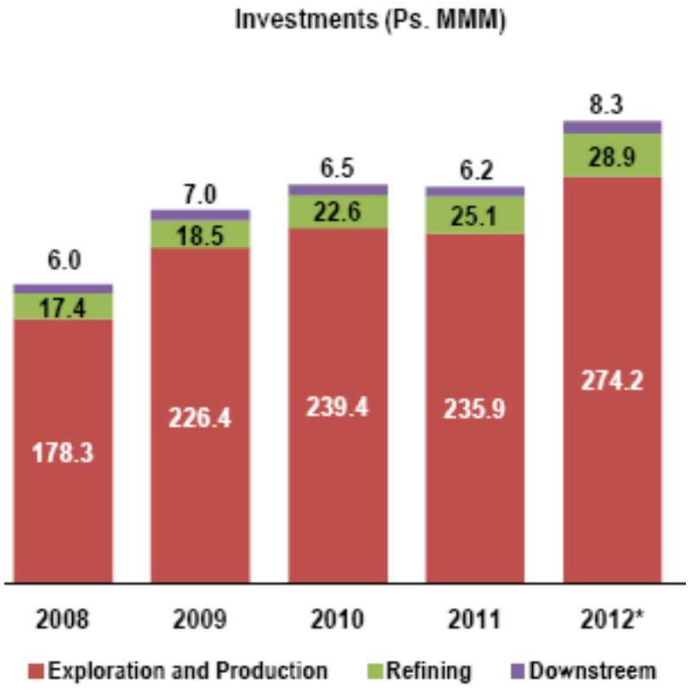


Source: Hydrocarbon Reserves as of January 1, 2011 http://www.ri.pemex.com/index.cfm?action=content&sectionID=25&catID=12703

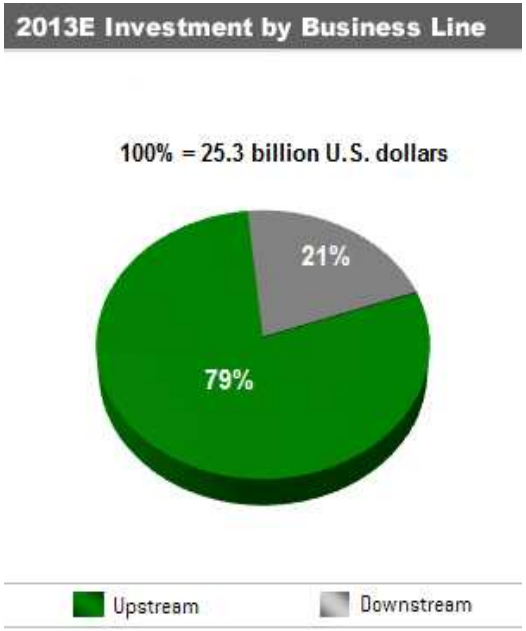
Prospective Reserves and Investment

Investments (Ps. billion) in 2012-2013

- Exploration and Production 274.2
- Refining 8.9
- Downstream 8.3



- Pemex investing in order to increase its operational and technological capabilities
- Investments have yielded, among other things, a higher rate of recovery, production, and availability



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Legal Regime

Constitution

- **Nationalization of Oil Companies Industry and Assets –** Adopted in 1938 via Presidential Decree

- **Constitutional Reform to Art 27 (paragraphs 4th and 6th) with respect to restrictions on ownership of Oil and Hydrocarbons –** Adopted in 1960

- **Constitutional Principles and Restrictions (Art. 27)**
  - Principles
    - Direct Domain of Nation *(dominio directo*)
    - Non-transferable and not subject to Statue of Limitations *(inalianable e imprescriptible*)
    - Production should be defined by Petroleum Laws
  - Restrictions - No Concessions or Contracts

Constitution

- **Intent and Scope of the Constitutional Principles and Restrictions on Contracts**
  - Wide, passionate and broad debate
  - Neither the Constitutional Reform nor the Supreme Court have clarified such intent and scope; **however**, the 2008 Petroleum Laws have included several additional restrictions to those under the Constitution
  - Scholars (*doctrina*) have considered that reference is either to:
    - Contracts which may grant rights to third parties that may affect the rights of Nation referred to above
    - Contracts which grant rights to third parties similar to concessions, and/or
    - Profit sharing or risk exploration and production contracts

- **Other Constitutional Provisions**
  - **Art. 28** the 4th paragraph with respect to monopolistic activities of State in these matters)
  - **Art. 134** with respect to government procurement principles applicable to Contracts by Pemex
    - **Principles.-** Acquisition, leasing, and sales of all kinds of goods, provision of services of any nature and public works contracts would be awarded or undertaken through public entities and resources, to ensure the best conditions to the State in terms of Price, Quality, Financing, Timing, and other relevant circumstances

Reform

- **Other Constitutional Provisions**
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- **2008 Reform included, among others:**
  - Amendments to Implementing Law of Art. 27 on Hydrocarbons (**Art. 27 Implementing Law**)
  - Enactment of Law of Pemex (**Pemex Law** and together with the Art. 27 Implementing Law, the **Petroleum Laws**)
  - Includes new regime for Contracts applicable to so-called "Productive Sustainable Activities" (**Incentive Contracts**) and includes additional rules and restrictions on compensation
  - Created National Hydrocarbons Commission (CNDH)

- **2009 Issuance of Pemex Law Regulations** (which confirmed rules and restrictions contemplated under Petroleum Laws)

Constitutional Dispute and Competent Authorities

- **Constitutional Dispute of 2009**
  - House of Representatives of Congress filed constitutional challenge in 2009 against Regulations issued by Executive Branch on Incentive Contracts
  - Supreme Court ruled that Regulations were valid; **however,** did not rule on analysis of constitutionality of specific contracts to be entered by Pemex under Regulations

- **Competent Authorities**
  - Ministry of Energy (*Secretaría de Energía*)
  - Ministry of Finance and Public Credit (*Secretaría de Hacienda y Crédito Público*)
  - Regulatory Energy Commission (*Comisión Reguladora de Energía*; "CRE")
  - National Hydrocarbons Commission (*Comisión Nacional de Hidrocarburos*)

Incentive Contracts

- Dual Contractual Regime (Petroleum Laws and General Procurement Laws)
- Pemex maintains direct ownership of hydrocarbons
- Rights to oil reserves may never be transferred; therefore, only Pemex and not Suppliers or Contractors may book reserves
- Control and management of oil industry remain subject to Article 3 of art. 27 Implementing Law
- **Compensation.** Compensation established under said contracts must always be in cash; therefore, a percentage of production or value of sales of hydrocarbons or its profits or earnings of contracting company may not be agreed upon as payment for services rendered or for work executed
- **No Preferential Rights.** Preferential rights may not be granted for any type of purchase of oil or its derivatives or to influence sale to third parties
- **No Share Production or Partnerships.** Contracts may not be executed if they include programs for shared production or partnerships in exclusive and strategic sectors that are undertaken by Mexican State under Article 3 of Regulatory Law
- **Payments.** Must be established in cash and must be reasonable in terms of industry standards or uses and included in authorized budget for Pemex
- **Non-solicited Proposals**.

Incentive Contracts (cont'd)

- **Payment Formulas -** Agreements must be set by fixed programs or predetermined formulas that provide certain price in accordance with applicable rules
- **Revisions -** Agreements must be established on quarterly basis and necessary revisions may be stipulated to incorporate any technological progress or variations to market prices of the raw materials or equipment used in corresponding work or others that contribute to improving efficiency of project based on mechanisms to adjust costs and fix prices authorized by Board of Directors
- **Enforceability -** Agreements should be valid and enforceable at time of execution
- **Penalties** - must be included with respect of the negative impact caused by activities of contractor regarding environmental sustainability and for any "breach of opportunity indicators," time and quality
- **Additional Compensation** may only be included when:
  - Contractor obtains financing for the works to be executed;
  - Contractor benefits from new technologies provided to the project; or
  - Other circumstances occur that are attributed to contractor and that result in greater profits for Pemex and have a better result for project or service; however, provide that compensation may not be fixed by reference to percentages of value of sales or of production of hydrocarbons. Any additional compensation must be established expressly when agreement is signed

Pemex Objectives 2013-2017

1. Increase Reserves through New Discoveries and Reclassification

- **Strategy 1.1** - Increase level of reserves of oil in **shallow waters** and **onshore areas**, and incorporate a resource average of 5,639 billion barrels of oil equivalent for period from 2013 to 2017

- **Milestones**
  - AVO analysis technology and seismic investment, available PSDM seismic processes - 2013
  - Acquisition of 14.083 km² of 3D seismic - 2017
  - Drilling of 274 exploratory wells – 2017

1. Increase Reserves through New Discoveries and Reclassification

- **Strategy 1.2** - Accelerate access to potential **Gulf of Mexico Deepwater**. Assessing potential of priority areas, with emphasis on research of oil in order to give certainty to prospective quantify resources and incorporate reserves that allow to contribute in medium-long term to maintain and/or increase production platform

- **Milestones**
  - Improved geological-geochemical models - 2015
  - Acquisition of 25.581 km² of 3D seismic, including special seismic processing in areas of complex geology and/or affected by salt tectonics - 2016
  - Drilling of 21 exploratory wells – 2017

1. Increase Reserves through New Discoveries and Reclassification (cont'd)

- **Strategy 1.3** - Approach exploration in research of **non-associated damp gas**, making priority areas through studies of petroleum systems, *plays* and seismic information to strengthen portfolio of exploration opportunities and increase reserves

- **Milestones**
  - Geological studies - 4 years
  - Acquisition of 3.935 km² of 3D seismic in Activo Burgos – 2017
  - Acquisition of 3.104 km² of 3D seismic in Activo Tampico-Misantla-Golfo – 2017
  - Drilling of 110 exploratory wells – 2017

1. Increase Reserves through New Discoveries and Reclassification (cont'd)

- **Strategy 1.4 -** Increase delimitation activity in order to accelerate development of **Proven Reserves**

- **Milestones**
  - Termination of 11 delimiters deepwater wells
  - Termination of 11 delimiters watershed in Southeast
  - Eight studies of characterization and delineation deepwater - 2017
  - Eleven studies of deepwater characterization and delimitation – 2017

1. Increase Reserves through New Discoveries and Reclassification (cont'd)

- **Strategy 1.5** - Assessing potential of **unconventional deposits** of shale oil and shale gas, allowing to contribute in medium term to maintain and/or increase oil production platform

- **Milestones**
  - Upper Jurassic in SBP and Mezoico Burgos – 2013; Upper Cretaceous in SBP and Mezoico Burgos - 2014
  - Upper Cretaceous TM Pimenta – 2014; Acquisition of 10.350 km² of 3D seismic – 2015; Drill 175 wells – 2017

2. Increase Production of Hydrocarbons

- **Strategy 2.1** - Implement best practices to manage decline of fields through primary recovery. Define and implement a new approach of well productivity to impulse improvement projects in order to decrease the decline of base production of oil production fields

- **Strategy 2.2** - Implement secondary and improved recovery practices. Increase recovery oil factor between 3% and 8% of original volume through implementation of secondary and improved recovery practices

- **Strategy 2.3** - Develop extra-heavy oil fields. Develop integrated plan for extra-heavy oil in Offshore Regions that integrates exploration opportunities and operating and marketing strategies

- **Strategy 2.4** - Accelerate entry into new fields production. Settle actions to reduce time between discovery and production entry into new field

3. Obtain efficiency levels over international standards of use of gas and production costs

- **Strategy 3.1** - Develop infrastructure to increase use of gas. Increase capacity of management and use of gas through infrastructure to reduce flaring of associated gas

- **Strategy 3.2 -** Optimize costs associated with production, discovery, development and transportation of hydrocarbons. Maintain cost competitiveness of discovery and development, and production, by optimizing drilling costs, infrastructure, transportation, maintenance, and refurbishment of hydrocarbons

Incoming Reform

New Administration and Proposal of Reform

- New Administration started in December 2012
- Despite political differences in Congress, during first few months important reforms have occurred in labor and education which shows a commitment to move political agenda forward
- President Peña Nieto achieved unprecedented political pact with major political parties, and expressed interest to pursue tax and energy reform in second half of 2013
- Objectives - Although specifics of reform are yet to be defined, Ministry of Energy recently announced that reform should include:
  - Further reform of Pemex internal corporate and budgetary structure
  - Reform the contracting regime of Pemex to:
    - Revise current rules and restrictions provided under the Petroleum Laws and Regulations
    - Allow Pemex to enter into partnerships to develop reserves

Opportunities in Oil and Gas Sector (General)

CHINCONTEPEC (E&P)

- Total reserves exceed 17 billion barrels of oil equivalent, which represents approximately 40% of Mexico's total reserves
- Located in States of Veracruz and Puebla and is part of Tampico-Misantla Basin, which is one of Mexico's main productive basins measuring 3,800 km² and is composed of several fields
- Development of Chicontepec's fields is considered unconventional due its low porosity and permeability. Historically, the recovery factor has been low; however, it has important hydrocarbon production potential
- Pemex E&P has selected six areas (Soledad, Amatitlán, Humapa, Pitepec, Miquetla and Miahuapan) for integrated E&P/Service contracts. Comprise three billion barrels of crude oil equivalent in 3P reserves, representing approximately 15% of Chicontepec's reserves

Source: http://contratos.pemex.com/en/chicontepec/Paginas/default.aspx

CHINCONTEPEC (E&P)(cont'd)

(a) Description.

- On December 20, 2012, PEP published International Public Bid No. 18575008-550-12 for award of 6 (six) Service Agreements for term of 35 years for production of hydrocarbons in following areas: (i) Amatitlán; (ii) Soledad; (iii) Humapa; (iv) Miquetla; (v) Miahupan; and (vi) Pitepec

(b) Technical Information.

- **Type**. Incentive Agreements
- **Term**. Up to 35 (thirty five) years
- **Applicable Law**. Pemex Law, its Regulations, and Guidelines issued by Pemex Corporate and Pemex E&P Board of Directors

(c) Award Process

• Date of Call	December 20, 2012
• Deadline to Purchase Bidding Guidelines	June 7, 2013
• First Clarification Meeting	March 25, 2013
• Date for Submission of Proposals and Opening of Proposals	July 11, 2013
• Date of Award	July 11, 2013
• Date of Execution of the Agreements	September 20,2013

Burgos (Gas)

- Burgos Project aims to develop productive potential of Cuencas de Burgos, Sabinas y Piedras Negras area in northern zone of country and thereby strengthen supply of gas in such area, through development of fields with more proven and probable reserves, definition of new areas partially developed, an aggressive exploration plan aimed at increasing gas reserves, and operation and maintenance of operation fields

- Project strategy is to increase rate of extraction of proved reserves from existing fields through:
  - Drilling intermediate wells
  - Exploitation of several deposits in one well
  - Integral studies of characterization and deposit simulation
  - Integrated design of wells and superficial infrastructure production, optimization of hydraulic fracturing
  - Unconventional drilling (multilateral, high angle and horizontal)

Burgos (Gas)

150 BURGOS - Integral Gas Compression Services I (cont'd)

(a) Description.

In January 2013, **PEP** published International Public Bid No. 18575109-517-12 for award of agreement for integral gas compression services in fields of Reynosa, Cuitláhuac, Miguel Alemán-Laredo, Monclova and/or others in *Activo Integral Burgos* located in States of Tamaulipas, Nuevo León, and Coahuila

(b) Technical Information

- **Type.** Services Agreement.
- **Applicable Law.** Acquisitions Law.
- **Term** of the works agreement. 1,333 calendar days

(c) Award Process

•Date of Call.	January 29, 2013
•Third Clarification Meeting.	March 8, 2013
•Date for Submission of Proposals and Opening of Proposals.	April 2, 2013
•Date of Award.	April 22, 2013
•Date of Execution of the agreement.	Pending to be announced

(d) Interested Companies

- Valerus Compression Services México, S de R.L. de C.V., Sistemas Integrales de compresión, S.A. de C.V., Indequipos México, S.A. de C.V., Exterran Energy de México, S.A. de C.V.

Burgos (Gas) (cont'd)

150 BURGOS - Integral Gas Compression Services II

(a) Description.

In January 2013, **PEP** published International Public Bid No. 18575109-516-12 for award of agreement for integrated gas compression services in the fields of Cuervito, Culebra Area Sur, Culebra Area Norte and/or others in *Activo Integral Burgos* located in States of Tamaulipas, Nuevo León and Coahuila

(b) Technical Information

- **Type**. Services Agreement
- **Applicable Law**. Acquisitions Law
- **Location**. Project will be developed in States of Tamaulipas, Nuevo León and Coahuila
- **Term** of work agreement. 1,360 calendar days

(c) Award Process

•Date of Call	January 29, 2013
•Seventh Clarification Meeting	March 12, 2013
•Date for Submission of Proposals and Opening of Proposals	March 26, 2013
•Date of Award	March 27, 2013
•Date of Execution of the agreement	April 11, 2013

(d) Interested Companies

- Valerus Compression Services México, S de R.L. de C.V., Sistemas Integrales de compresión, S.A. de C.V., Indequipos México, S.A. de C.V., Exterran Energy de México, S.A. de C.V.

Ku-Maloob-Zaap (Oil Pipelines)

- Integrated project Ku-Maloob-Zaap is primarily focused on production and incorporation of reserves of heavy and extra heavy oil and associated gas fields, which exist in Ku, Maloob, Zaap, Bacab, Lum, Ayatsil, Tekel and Pit fields in Marine Region of PEMEX Exploration Production, which jointly maintain stable production platform for at least next five years

- Having great potential deposits fields where nitrogen is injected as pressure maintenance system, which contributes to achieve goal of reducing its decline. Incorporating production in coming years from Ayatsil, Tekel, and Pit

- Main problem of project is management of heavy and extra heavy oil, for which develops strategies for oil mixing to maintain required quality by the customers and management of gradual increase in percentages of water and salt in streams of oil

Ku-Maloob-Zaap (Oil Pipelines)(cont'd)

41B KU-MALOOB-ZAAP (Marine Pipelines Construction)

(a) Description.

In February 2013, PEP published International Public Bid No. 18575106-582-12 for award of agreement for procurement and construction of two marine pipelines: (i) oil-gas pipeline of approximately 20" Ø x 6.8 km of length from Platform PP-Ayatsil-A to the Plem-1 of the floating processing unit (UFP) (Línea 4) and (ii) an oil-gas pipeline of approximately 12" Ø x 1.5 km from the underwater interconnection in the L-7 to the Platform PP-Ayatsil-A (Line 9), located in Gulf of Mexico

(b) Technical Information

- **Type**. Public Work Agreement
- **Applicable Law**. Acquisitions Law
- **Term of the works agreement**. 310 calendar days

(c) Award Process

•Date of Call	February 5, 2013
•Prequalification Results	March 15, 2013
•First Clarification Meeting	Pending to be announced
•Date for Submission of Proposals and Opening of Proposals	Pending to be announced
•Date of Award. Pending to be announced. Date of execution of agreement	Pending to be announced

(d) Interested Companies

•Tradeco Infraestructura, S.A. de C.V., Hoc Offshore, S. de R.L. de C.V., Permaducto, S.A. de C.V., Oceanografía, S.A. de C.V., Arendal, S. de R.L. de C.V., Global Offshore México, S. de R.L. de C.V., Swiber Offshore Mexico, S. A. de C.V., Distribuciones y Representaciones Evya, S.A. de C.V.

Ku-Maloob-Zaap (Oil Pipelines)(cont'd)

41B KU-MALOOB-ZAAP (Oil-Gas Pipeline Construction)

(a) Description.

In January 2013, **PEP** published International Public Bid No. 18575106-578-12 for award of agreement procurement and construction of oil-gas pipeline of approximately 30"Ø X 7.8 Km of length from Platform of Production KU-H to Platform connection KU-A2, located in State of Campeche and in Gulf of Mexico

(b) Technical Information

- **Type**. Public Work Agreement
- **Applicable Law**. Acquisitions Law
- **Term** of the works agreement. 270 calendar days

(c) Award Process

•Date of Call	January 17, 2013
•Fourth and Last Clarification Meeting	March 6, 2013
•Date for Submission of Proposals and Opening of Proposals	March 8, 2013
•Date of Award	March 19, 2013
•Date of execution of agreement	Pending to be announced

(d) Interested Companies

•Subsea 7 Mexico, S. de R.L. de C.V./Subsea 7 (US), LLC/Subsea 7 West Africa Contrecting Limited Global Offshore México, S. de R.L. de C.V., Tradeco Infraestructura, S.A. de C.V.

Platforms

- Pemex E&P has important deficit with respect to contracting of Platforms to perform works in Gulf of Mexico
- Pemex E&P together with Finance Division of Pemex Corporate have been structuring project to resolve situation
- Although no specific bids have been announced, it is believed that Pemex E&P needs more 20 platforms (approximately US$6 billion to US$8 billion program)
- <u>Description</u>
  - Pemex E&P delivers a request for purchase and construction of platforms to a third party contractor
  - Selects a contractor and/or a financial institution to purchase rights to Platform and lease it back to Pemex E&P
  - Pemex E&P and Contractor enter into medium term lease or service agreement pursuant to which Pemex E&P pays for use of platform, subject to terms and conditions therein provided

Los Ramones (Natural Gas Pipeline)

- Notwithstanding that Mexico has important reserves in natural and associated gas, including shale gas, currently it has important shortage of gas and is believed that by 2016 it will be net importer of gas and other hydrocarbons
- Pemex Gas intends to reduce shortfall by benefiting from supply of natural gas in south of USA by construction of 1000km gas pipeline from Texas to Central Mexico
- Project has been divided in two phases
  - First to be constructed by Gasoductos de Chihuahua (GDC), a joint venture by Pemex Gas and Sempra Energy
  - Second to be developed together between offshore subsidiary of Pemex (TAG Pipelines) and strategic partner to be selected through competitive bid process
- Timing - To be defined, however is expected to be officially announced during first half of 2013

Tula Refinery

- Increase refining capacity to meet demand growth, capture refining margins and use the residuals produced in National Refining System (Sistema Nacional de Refinación)

- Milestones - New Refinery with residual utilization in Tula

2012	Engineering Contracts
2012 - 2013	Development of Basic Engineering
2012 - 2014	Development of Basic Engineering (pipelines)
2013	Bidding Guidelines
2013 - 2017	Procurement and Construction
2017	Start of Operations

Tula Refinery

- Construction of infrastructure to produce ultra-low sulfur gas and diesel

- Milestones - Gas Phase

  2013 Finish Tula's and Salamanca's EPC

  2013 Finish Cadereyta's and Cd. Madero's EPC

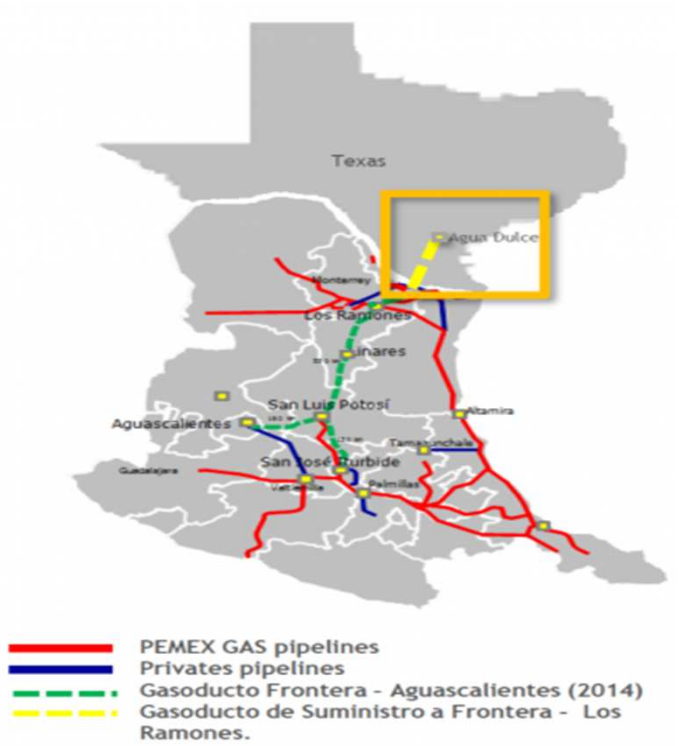
  2013 Finish Salina Cruz' and Minatilán's EPC

- Diesel Phase – To Be Determined
  - Bidding Guidelines for Cadereyta's and other refineries' EPC

US Infrastructure

US Infrastructure Required to Connect to Mexican Pipeline Network (1)

- US side pipeline construction for Pemex to connect to Los Ramones Gasoductos de Chihuahua from Agua Dulce, Texas to flow 2.1 Bcf/d



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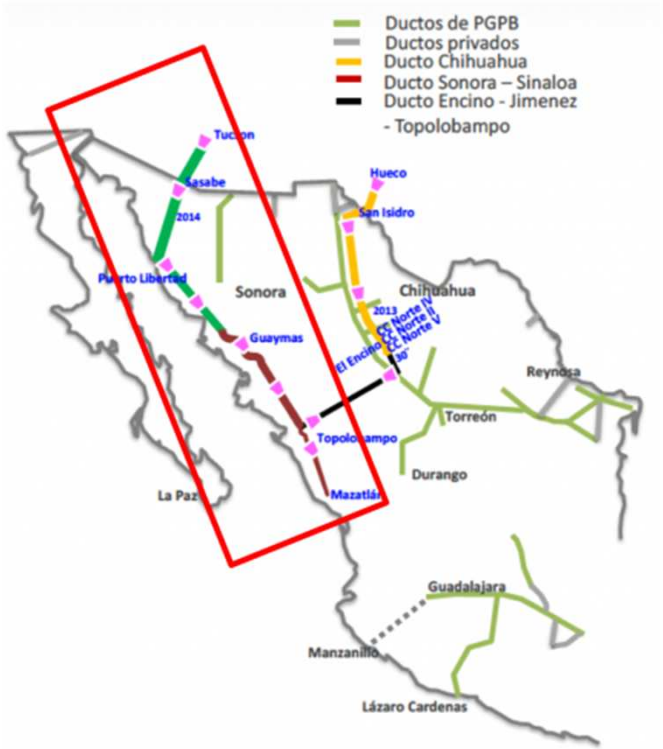
US Infrastructure Required to Connect to Mexican Pipeline Network (2)

- US side pipeline construction for CFE to connect to Mazatlan from Tucson, Arizona to connect with the Sonora pipeline



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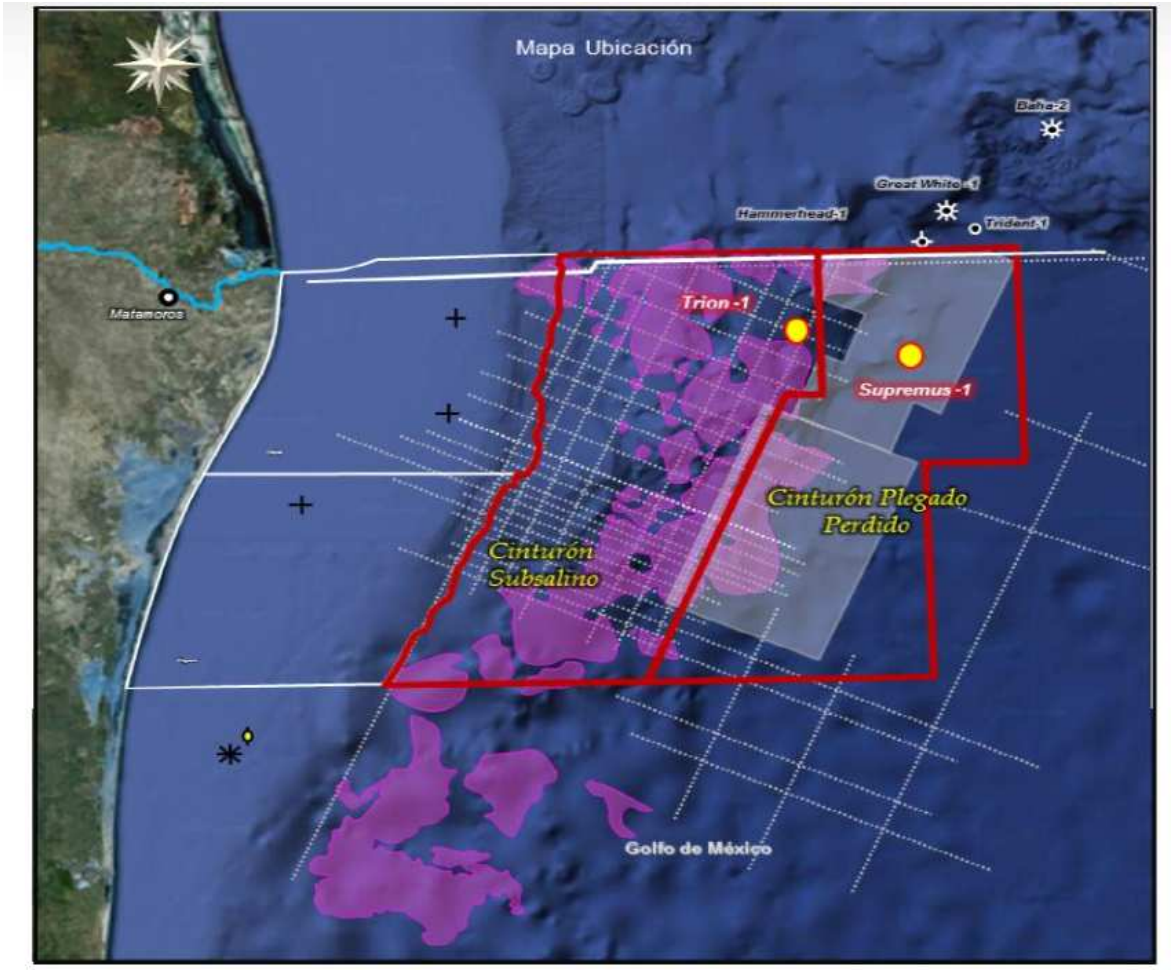
US Infrastructure Required to Connect to Mexican Pipeline Network (3)

- US side pipeline construction for CFE from El Paso to supply five (5) new CFE power plants

Deepwater Activities

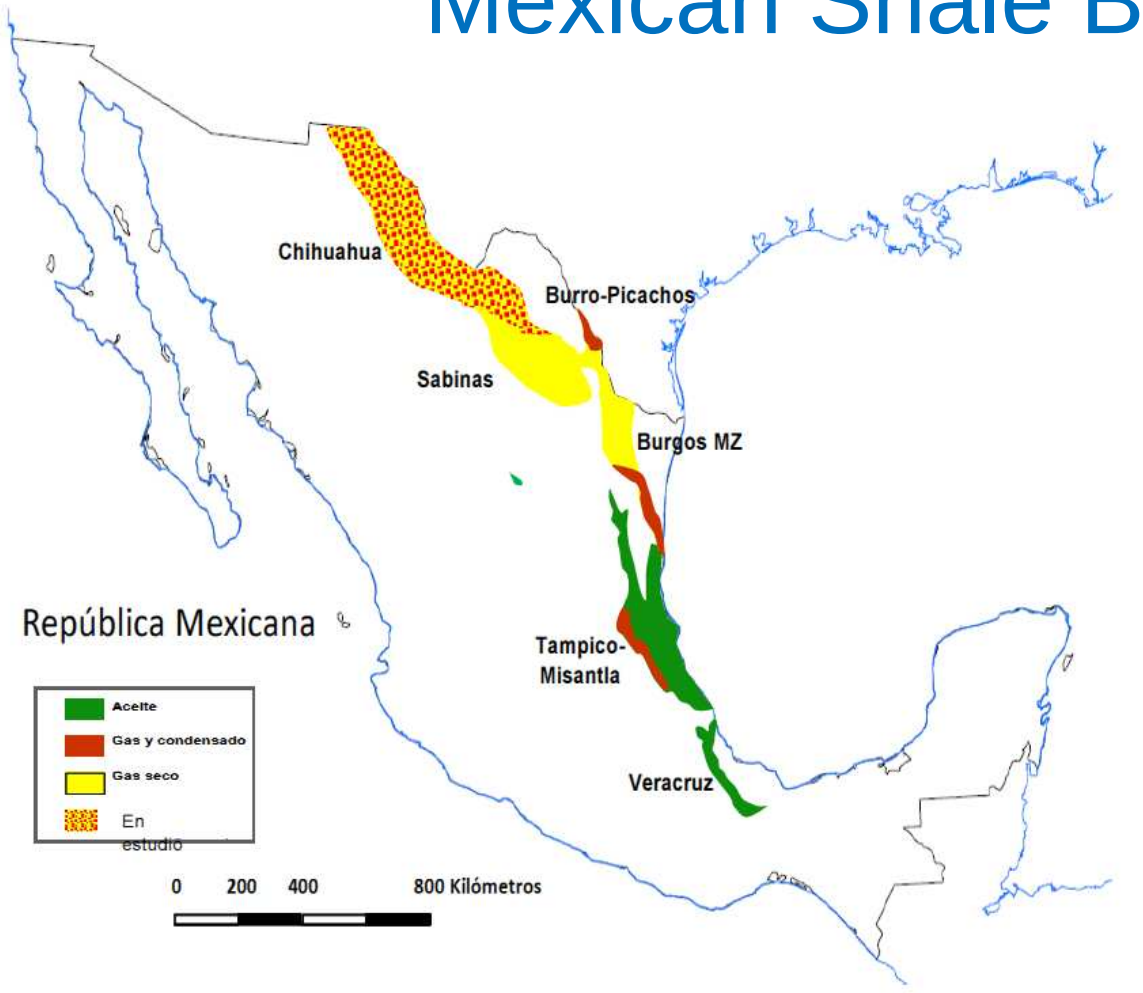
Deepwater



- Current investments (2002-2001) = 49 billion Ps.
- Seismic 3-D information for 107, 762 km^2
- 21 wells, 11 are currently producing
- 3P reserves 736 MMMboe
- Pemex has established collaboration agreements with Shell, BP, Petrobras, Intec, Heerema, Pegasus, amongst others

Shale Resources

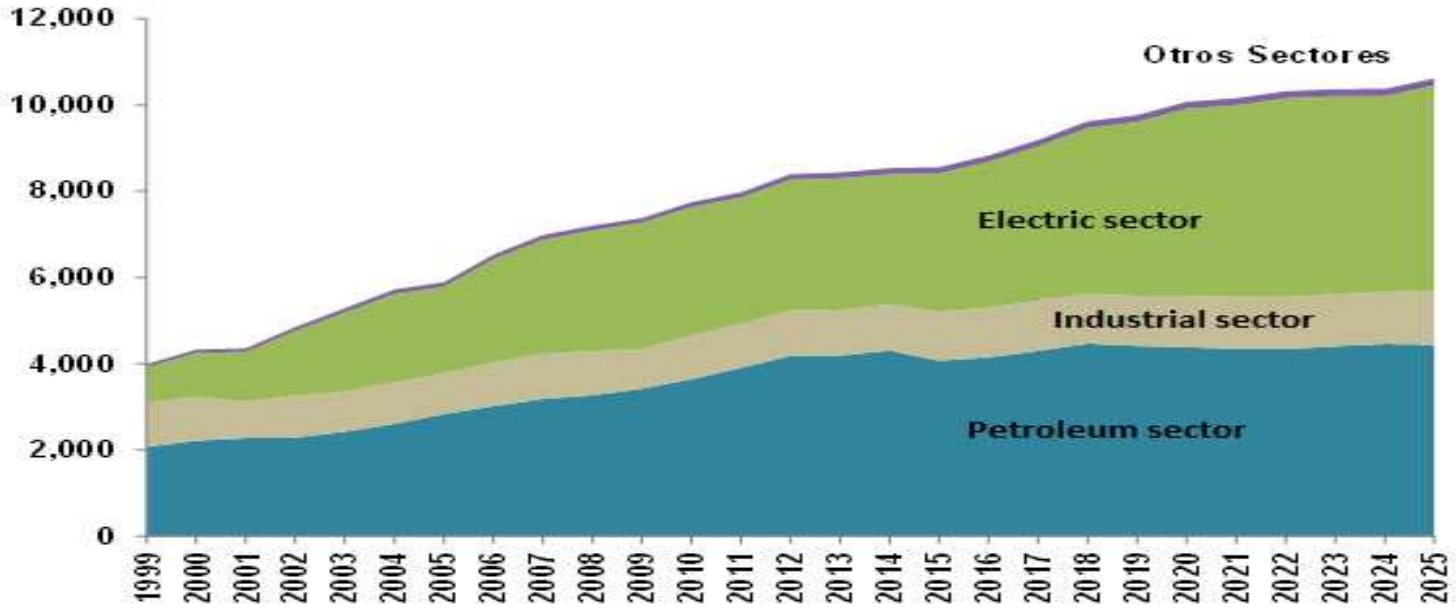
Mexican Shale Basins



- 200 exploratory opportunities are identified
- Estimated prospective gas resources between 150-459 billion c/ft
- International Energy Agency considers gas potential of 681 billion c/ft
- Wells Habano 1 and -1 Emergente and Percutor -1 have confirmed the continuity of the Eagle Ford basin zone into Mexcio

Mexican Investment in Shale Gas

- Natural Gas Demand Forecast – Estimated Demand 2025 (SENER): 11,063 mmpcd;
- Additional supply required 5,000 mmpcd (2010 production 5,916 mmpcd)



Mexican Ministry of Energy has estimated an additional $10 billion investment is needed annually for next 10 years to develop Mexican shale resources

Developing Mexican Shale Resources

- Mexico is estimated to have 681 trillion cubic feet of technically recoverable shale gas resources
- "*Pemex will be moving aggressively on exploiting shale oil and gas deposits particularly those that are part of the Eagle Ford formation in Texas that crosses the border into Mexico*," WSJ, 3/2/13
- Burgos Basin is now producing Shale Oil (Anhelido-1) 400 b/d of shale liquids
- US / Texas oil field services companies will be needed to work with Pemex to implement technology
  - Identification of areas to frac
  - Thousands of wells to be produced
  - Sand/proppant technologies
  - Cementing completion

Back to the Future: Mexican Resurgent Manufacturing Growth

- Mexican industrial and manufacturing sectors are significant ongoing and growing source of energy consumption, particularly natural gas, and are experiencing a resurgence
- "*Is Mexico the Comeback Kid*," NY Times, Friedman, 2/26/13
- "*How Mexico Got Back in the Game*," NY Times, 2/26/13
- "*Mexico: The New China*," NY Times, 1/26/13
- "*Reshoring Manufacturing, Coming Home*", Economist, 1/19/13
- "*Mexico and the United States: The rise of Mexico*", Economist, 11/22/12

Federal Electricity Commission (Comisión Federal de Electricidad) (**CFE**)

CFE

- **CFE**:
  - CFE is decentralized government agency, duly incorporated and which owns its own assets
  - CFE is also government agency in charge of planning national electrical system. Said plan is set forth in Works and Investment Program of The Electrical Sector, which describes evolution of electrical market, as well as expansion of generation and transmission capacity, in order to satisfy demand for electricity
- Infrastructure
  - Electric power generation is made up of 209 generating plants
  - Installed capacity of 52,515 megawatts (MW)
  - 22.67% of installed capacity stems from 22 plants which were built using private capital
  - CFE creates electric power using various technologies and various primary energy sources
  - CFE has more than 756,000 Km. of power lines that transmit and distribute electric power

CFE Legal Regime

- **Constitutional Provisions**
  - **Art. 25** Responsibility to ensure a comprehensive and sustainable development. with the social and private sectors, according to the law, to promote and organize the priority development areas
  - **Art. 27** every aspect of electrical power from generation, to transmission and marketing, are reserved to the Nation
  - **Art. 28** the paragraph 4th with respect to monopolistic activities of the State in this matters
- **Legal Provisions**
  - **Art. 1**. of the Law for the Public Service of Electricity (the **Electricity Law**) states that every aspect of electrical power from generation, to transmission and marketing, are reserved to the Nation. The Nation will not grant concessions
  - **Art 7**. the only authorized party to provide all electricity services in Mexico is CFE
- **1992 Reform Included, among others:**
  - Amendments to **Electricity Law** authorized limited private investment in services considered to be "Non-Public Power Activities" which included following:
    - Independent power production (**IPP**);
    - Co-generation;
    - Self-supply Projects;
    - Importation and Exportation of power, and
    - Combination of above

CFE Objectives 2012-2016

Investment and Infrastructure

- **Estimated Generation Capacity 2012 – 2026**
  - CFE has estimated that in 2026 the capacity of Mexican Power Sector should reach 85,772 MW
  - Approximately US$80 billion dollars of investment will be required
  - Required investment is considered to be well beyond financial resources of public sector
- **Required Investment**
  - US$60 billion in generation
  - US$16 billion in transmission
  - US$5 billion in pipelines
- **National and International Investment**
  - 35% national investment
  - 65% international investment
- **Natural Gas**
  - Considering that national natural gas production is only enough to cover current demand, therefore the additional 26,000 MW in combined cycle would operate with imported gas, this would represent a US$7.6 billion investment (considering a US$5.00dlls/MMNtu)
- **Infrastructure Installations**
  - 17,000 km of transmission lines
  - Over 3,000 km of pipelines

Technologies Used for Generation

2010 Generation Capacity

52,947 MW

Technologies Used for Generation

- Combined Cycle 34.0%
- Thermoelectric 24.3%
- Hydroelectric 21.7%
- Coal Fire Energy 10.2%
- Turbo-gas 4.8%
- Nuclear Energy 2.6%
- Geothermal Energy 1.8%
- Internal Combustion 0.4%
- Eolic Energy 0.2%

2026 Generation Capacity

85,772 MW

Technologies Used for Generation

- Combined Cycle 51.7%
- Hydroelectric 19.0%
- New Clean Generation 8.2%
- Coal Fire Energy 6.4%
- Eolic Energy 4.2%
- Turbo-gas 3.3%
- Thermoelectric 3.3%
- Nuclear Energy 1.9%
- Geothermal Energy 1.2%
- Internal Combustion 0.4%
- Petroleum Coke 0.4%
- Solar 0.023%

Opportunities in Baja, California

36 CC Baja California III.

(a) Description

In December 2010, CFE published Call for International Public Bid No. 18164093-014-10 for the award of an agreement for electricity generation with a net capacity of not less than 217 MW and not over 294, and a 25-year power purchase in order to develop, build, operate and maintain the "36 CC Baja California III" Central and associated facilities, which interconnection to National Electricity System will be located in State of Baja California

(b) Technical Information

- **Type.** IPP Agreement
- **Applicable Law.** Acquisitions Law
- **Capacity.** 217 MW – 294 MW

(c) Award Process

•Date of Call	November 16, 2010
•Twenty Seventh Clarification Meeting.	March 22, 2013
•Date for Submission of Proposals and Opening of Technical Proposals	April 10, 2013
•Date for Opening of Economic Proposals	April 29, 2013
•Date of Award	Pending to be announced

(d) Interested Companies

•Iberdrola Energía, S.A.U.; Mitsubishi Corporation; Mitsui & Co. LTD; ICA Fluor Daniel, S. de R.L. de C.V.; Cobra Instalaciones y Servicios, S.A.; Abener México, S.A. de C.V.; Iberdrola Ingeniería y Construcción México, S.A. de C.V.; Unión Fenosa Operación México, S.A. de C.V.; M.I. Consultores, S.A. de C.V.; Techint, S.A. de C.V.; SENERMEX Ingeniería y Sistemas, S.A. de C.V.; General Electric International Operations Company, Inc.; Samsung C&T Corporation; Grupo Samsung Ingeniería México, S.A. de C.V.

Conclusion

and

Q&A

Thank you!

Gracías!

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