TRD "Parque Industrial Querétaro"

Global Petroleum Show
"Implementation of a Liberalized Natural Gas Market in Mexico: The Role of CENAGAS"
June 2017

Sistrangas

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Formed by:

- 10,212 kilometers of pipelines.
- Capacity: 6.2 bcfd.
- 9 compressor stations in the SNG with 266,160 HP.
- 6 private compressor stations with 140,960 HP.
- 27 injection points and 113 extraction points

Pipeline	Length (km)	Capacity (MMcfd)
SNG (Cenagas system)	8,867	5,618
Gasoductos de Tamaulipas	114	1,000
Gasoductos del Bajío	204	90
Gasoductos de Zacatecas	172	20
Gasoducto Los Ramones I	116	2,100
Gasoducto Ramones Fase II Norte	447	1,363
Gasoductos Ramones Fase II Sur	292	1,353

*The percent for supply and demand is the average for 2016.

SISTRANGAS Second Review of the five year plan 2015-2019

- Second Annual Revision (2017)
  - Capacity strengthening.
  - Detailed and disaggregated models for the value chain of natural gas.

SISTRANGAS Second Review of the five year plan 2015-2019

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Awarded projects

1. Tuxpan-Tula
2. La Laguna - Aguascalientes
3. Tula-V. Reyes
4. V. Reyes-Guadalajara
5. San Isidro - Samalayuca
6. Samalayuca - Sásabe
7. Sur de Texas-Tuxpan

Other projects

1. Nueva Era (Mexico's Midstream)
2. Salina Cruz-Tapachula
3. Ramones - Cempoala

Projects to be tender on 2017-2019

8. Jáltipan-Salina Cruz
9. Lázaro Cárdenas-Acapulco

Strategic Proyects

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A. Awarded Projects contained in the Five Year Plan (2015-2019)

Project		Mexican States involved	Company	Lenght Kms.	Estimated Investment MMUSD*	Date awarded	Operation Starts
1	Tuxpan-Tula	Hidalgo, Puebla and Veracruz	**Transcanada**	283	458	2015	Dic-2017
2	La Laguna-Aguascalientes	Aguascalientes, Zacatecas and Durango	**Fermaca**	600	473	2016	2018
3	Tula-Villa de Reyes	Hidalgo and San Luis Potosí	**Transcanada**	420	554	2015	Jan-2018
4	Villa de Reyes-Guadalajara	Aguascalientes, Jalisco and San Luis Potosí	**Fermaca**	305	294	2016	2018
5	San Isidro-Samalayuca	Chihuahua	**Ienova**	23	109	2015	2017
6	Samalayuca-Sásabe	Chihuahua and Sonora	**Carso Electric**	650	571	2015	2017
7	Sur de Texas-Tuxpan	Tamaulipas and Veracruz	**Transcanada/IEnova**	800	2,111	2016	Oct-2018

Jaltipan - salina cruz project

- **States Involved:** Veracruz and Oaxaca.
- **Length** [2/]**:** 247 kilometers.
- **Diameter and Capacity:** Depending on the estimated demand (pending).
- **Estimated bidding period:** 2017-2018.
- **Estimated start-up period:** 2020 – 2022.

1/ According to information from the second annual review of the Sistrangas Five Years Plan 2015-2019, published on March 31, 2017.
2/ Trace tentative, with information from CENAGAS.

Lazaro Cardenas – Acapulco project

Pipeline Property of CENAGAS (SNG)

Lazaro Cardenas – Acapulco Project*

- **States Involved** : Michoacán and Guerrero.
- **Length** [2/]: 331 kilometers.
- **Diameter and Capacity:** Depending on the estimated demand (pending).
- **Estimated bidding period** : 2017-2019.
- **Estimated start-up period** : 2020 – 2022.

1/ According to information from the second annual review of the Sistrangas Five Years Plan 2015-2019, published on March 31, 2017.
2/ Trace tentative, with information from CENAGAS.

Strategic Projects

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6 years total investment for more than **$380 MMUSD**

2017 investment for **$80 MMUSD**

Rehabilitation and maintenance of pipelines and compressors

Supervisory control and Data Acquisition System (SCADA)

Risk-based integrity management

Modernization of the supervision monitoring systems and measurement stations

2016 - 2019

2017 - 2021

Results

A. Ensuring the mechanical integrity.
B. Increasing reliability of operations .
C. Guaranteeing safe operations.

Maintenance Strategy Through a Third Party Contract

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Starting: SECOND SEMESTER OF 2017

1st Complete pipeline systems in their own rights of way.

2nd Complete pipeline systems having shared rights of way in north and northwest region.

3rd Complete pipeline systems having shared rights of way in center and south region.

Maintenance Strategy Through a Third Party Contract

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Tender process: Expected to begin next August 2017

01
Valtierrilla – Lazaro Cárdenas
442.519 Kms.

02
Sonora
346.660 Kms.

03
Chihuahua – Coahuila –Durango
465.678 Kms.

04
Veracruz – Puebla – Tlaxcala – Estado de México – Hidalgo
571.556 Kms.

Establishment of regional offices

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Pátzcuaro Compression Station

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Increased capacity in the Valtierrilla – Lázaro Cárdenas pipeline.

SCOPE

- Establish the best location.
- Determine compression capacity and the number of units required.

Basic engineering and the cost benefit analysis will be outsourced through a public tender process.

First International Auction Process

A total of 753,722 MMBtu/d of capacity was auctioned, in NET Mexico, a Texas pipeline interconnected to SISTRANGAS-Los Ramones.

Company	Assigned Capacity (MMBtud)	Pipe	Departure Rate	Overprice to pay
BP	190,000	EFM-Nueces	0.31 USD	0
	10,000	DCP-Gulf Plais	0.31 USD	0
Industrias del Álcali	16,584	ETP-Delmita	0.31 USD	0
Fábricas de Envases de Vidrio del Potosí	4,157	ETP-Delmita	0.31 USD	0

Total 220,741

Next Auctions:
Electronic Bulletin Board Auction Process

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Capacity release
The EPE registers Available Capacity and establishes Departure Rate.

Publication
CENAGAS publishes the EPE's Available Capacity.

Interested users registration
Interested users register the information required to create a new account in the Electronic Bulletin Board.

Bidding time
Interested users make their offers which most be higher or equal to Departure Rate.

Results
The Electronic Board automatically assigns the Capacity to the user with higher offer until the Capacity is completely assigned.

CENAGAS approves the EBB's result and publishes it.

Published Auction list menu.

OPEN SEASON 2016-2017

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Receipt of request and proposal of βs: first round

March 10 to March 21, 2017

Second round of βs proposal

March 27 to April 7, 2017

Economic allocation criteria

Validation feasibility in hydraulic model

April 10 to May 4, 2017

Firm base service

May 22 to June 16, 2017

Open Season in the Integrated System

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97% of the available (published) capacity was assigned

Who has the capacity in 2017-2018?

Open Season in the Integrated System

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97% of the available (published) capacity was assigned

Open Season remaining milestones

Phase	Date
Assessment of requests	April 10th- May 4th
Notifications	May 8th-12th
Reserved capacity Swaps	May 15th-19th
Signing the contracts	May 22th- June 16th
Contracts effective	1st of July, 2017

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thank you

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