

KEY OIL, GAS AND LNG PRICES

CRE MEXICO GAS PRICE \$/MMBtu

Period	Price
December '16	3.163

Source: CRE daily hydrocarbons report

VPM FORWARD CURVE \$/MMBtu

Period	Price
January '17	3.713
February '17	3.698
March '17	3.652

Source: ICIS

SPOT LNG ASSESSMENT \$/MMBtu

Period	Mexico East
January '17	6.500
February '17	6.550

Source: ICIS

LNG DES CONTRACT ASSESSMENTS \$/MMBtu

Period	Altamira	Manzanillo
January '17	3.815	3.278
February '17	3.806	3.270

Source: ICIS

INTERNATIONAL MARKETS \$/MMBtu

Period	Henry Hub	EAX
January '17	3.635	8.250
February '17	3.626	8.100

Source: NYMEX, ICIS

CRUDE OIL \$/bbl

Period	WTI	Brent
February '17	51.97	53.93

Source: NYMEX

CRE, CENAGAS resolve IPP open season uncertainty

Mexico's first open season for capacity in the Sistrangas natural gas transmission system launched on 28 November, with energy regulator CRE and gas transmission system operator (TSO) CENAGAS pushing through two final key pieces of legislation to resolve outstanding issues.

A CRE resolution passed on 29 November established that independent power producers (IPPs) will not have to participate in the open season, despite differences in supply contracts held by these generators with either of Mexico's state energy companies (EPEs) – power utility CFE or oil and gas company Pemex.

The right of companies in possession of baseload supply contracts to reserve capacity without participating in the open season had already been established (See *MER 26 October 2016*).

The latest CRE resolution also establishes that IPPs without baseload agreements with either EPE can reserve Sistrangas capacity outside of the open season process.

Unlike the baseload contracts, these alternative supply agreements do not guarantee the right of the generator to reserve capacity in the network. Instead companies in possession of these alternative supply agreements were awarded acquired rights to the system in 2010-11, recognising their right to access a certain volume of supply equivalent to their average historical demand. These acquired rights did not however establish the holders' right to access a specific injection point to the Sistrangas network – something that had been defined in baseload supply contracts.

Now, IPPs with acquired rights will have until the 31 January 2017 to reserve capacity in the network with CENAGAS, with the TSO working with the IPP to identify a specific system injection point. Their existing supply agreements with either EPE will remain unchanged.

If companies choose not to exercise their right to take Sistrangas capacity, it will instead be allocated to their existing EPE supplier.

Market sources have previously told ICIS that IPPs which do not exercise their right are unlikely to be given a second opportunity to do so. Much like industrial companies participating in the open season as acquired rights holders, those that choose not to exercise their right to use the acquired rights and reserve capacity in the system will instead remain as clients of Pemex. Their supply contracts will then be included in the contract release programme recently proposed by CRE, which will see Pemex shed 70% of its existing supply contracts by 2019.

Injection points

A second key piece of information seen as critical by those looking to participate in the open season, namely available capacity at injection points to the Sistrangas network, was published on the CENAGAS website over the week ended 25 November.

According to the data, the biggest single source of available capacity will be in the 2.1 billion cubic feet (bcf) (59.5 million cubic metres) per day Los Ramones pipeline which connects southern Texas production centres to demand points in central Mexico. Just over [» Page 7](#)

CENACE to seek clearing house for future power auctions

Mexico's power market operator CENACE plans to launch a public tender for the provision of a clearing house service early next year, to allow wider participation in future power market auctions.

Details on the timetable for the clearing house tender have yet to be finalised, but the round will likely be launched in the first quarter of 2017. Market sources say that they are waiting for the publication of the initial rules for the third long term power auction, due for launch in either March or April next year, to begin the process of searching for a clearing house.

CENACE's first two power auctions, awarded in March and September of this year, allowed project developers to submit offers to supply firm power supply, clean energy cer-

tificates (CELS) and capacity to only one counterparty, CFE suministro basico, the regulated market supply unit of Mexico's state power utility CFE.

However, the operator hopes that private entities will also be able to participate in future auctions alongside CFE, signing offtake contracts from new and existing projects. This would mean that load responsible entities such as qualified suppliers or qualified users on the new deregulated market could go directly to the auction to purchase power, CELs and capacity to meet their forward curve supply requirements.

Once in place, the clearing house would then be in operation for the first mid-term power auction, which is currently contemplated for October next year, and all CENACE

organised auctions held thereafter.

Manuals

Manuals for the mid-term power auction, as well as the financial transmission rights (FTR) auction, are still in the process of being designed by Mexico's energy ministry SENER, market sources told ICIS.

Drafts of both manuals are expected for publication on the website of Mexico's regulatory reform agency COFEMER before the end of this year. After a public comment period, the final manuals should be published in the first half of 2017.

According to analysis from Mexico-focused consultancy Essentia Advisors, the mid-term auction is unlikely to include CELs, and will instead simply offer one-to-three [» Page 7](#)

Mexico Energy Report

POWER

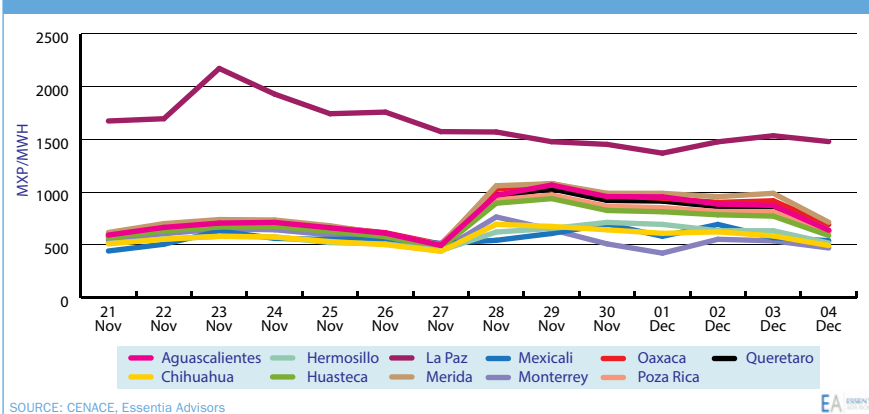
SEN marginal costs mixed over most recent two-week period

Average day-ahead marginal costs showed a mixed pattern over the 21 November-4 December period when compared with year ago levels – broadly lower for the first week of the reporting period, and significantly higher over the second week, according to the latest pricing data from Mexico's power market operator CENACE.

For the week ended 27 November, year-on-year costs were lower in 10 of the 11 key SEN transmission nodes followed by ICIS.

Only the Mexicali node in the north of the isolated Baja California grid saw increased costs over the first week of the report. However, for the week ended 4 December, costs were higher in each of the 11 nodes. The largest jump by percentage among nodes on the Sistema Interconectado Nacional (SIN) grid which covers mainland Mexico was seen at the Oaxaca node in [Page 3](#)

AVERAGE DAILY MARGINAL COSTS ACROSS SELECTED SEN NODES



SOURCE: CENACE, Essentia Advisors



AVERAGE MARGINAL COSTS ACROSS SELECTED SEN NODES (MXP/MWH)

Node	Week 48 (21-27 November)			Week 49 (28 November-4 December)			2016 w/w % diff
	2016 seven-day average	2015 seven-day average	Y-Y % diff	2016 seven-day average	2015 seven-day average	Y-Y % diff	
Aguascalientes	633.88	655.83	-3.35	906.08	581.20	55.90	42.94
Chihuahua	526.16	546.36	-3.70	616.48	487.91	26.35	17.17
Hermosillo	527.61	613.69	-14.03	637.25	542.79	17.40	20.78
Huasteca	600.89	636.07	-5.53	801.59	562.74	42.44	33.40
La Paz	1792.29	2552.12	-29.77	1479.65	1218.99	21.38	-17.44
Merida	652.91	726.67	-10.15	967.41	630.67	53.39	48.17
Mexicali	535.89	286.77	86.87	603.17	305.07	97.71	12.55
Monterrey	575.60	607.65	-5.28	556.02	531.41	4.63	-3.40
Oaxaca	645.05	645.66	-0.09	932.06	571.75	63.02	44.49
Poza Rica	608.22	656.67	-7.38	836.61	583.61	43.35	37.55
Queretaro	627.15	668.85	-6.23	881.09	591.17	49.04	40.49

Source: CENACE

EKTRIA introduces 2016 year-end swap contracts

EKTRIA, the commercial brand of Mexico-focused generator Fisterra Energy, has introduced two new financial swap contract offers for the period of 7-20 December.

The offers include swap contracts for the Week 51 and 52 periods, as well as monthly

contracts for the first half of 2017, quarterly contracts for the year ahead and calendar year contracts through to 2021. The end of year period traditionally represents a time of quiet commercial activity, as power consumption drops off over the Christmas period.

The fall off in demand is reflected by the \$10.00/MWh discount between the EKTRIA offers for Week 51 and Week 52.

Along the forward contract curve, EKTRIA's prices are little changed from the previous offers published on 23 November. [Page 3](#)

Mexico Energy Report

POWER

SEN marginal costs mixed over most recent two-week period

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southern Mexico with an increase of 63%. The smallest increase on the SIN was seen in the large demand centre of Monterrey, at 4.6%. On a weekly basis, SIN prices were on average 32% higher for the week ended 4 December than the preceding week, where they averaged Mexican pesos (Ps) 792.73/MWh (\$38.87/MWh). Prices averaged Ps 599.72 for the week ended 27 November. The lower costs during the first week of the reporting period came despite an increase in SIN capacity outages compared to the previous week. According to CENACE data, capacity outages for the week ended 26 November were 541MW. For the week of 27 November - 3 December, capacity outages averaged 335MW, down by 38% from the previous week. Some of the outages were for routine maintenance, but the majority were for unscheduled repairs, CENACE said.

One reason week 48 costs were lower year-on-year was that consumption was down by 0.9%, according to CENACE data. Year-on-year costs were higher over the second week of the reporting period in part because of increased consumption, which was 4.5% higher. Congestion charges, which indicate a lack of generation capacity to meet demand load requirements at a specific node, were mostly negative; in the low single-digits over the week ended 27 November and mainly in the double digits over the following week.

Average high temperatures have cooled in the north, but remained above 30°C in the southern part of the country, according to data published by Mexico's Servicio Meteorológico Nacional weather service. According to the latest CENACE data, power consumption across the SEN was at 34.4GW in the early afternoon of 6 December. Peak demand for the year, seen on 8 July, was 40.9GW. adam.yanelli@icis.com

EKTRIA introduces 2016 year-end swap contracts

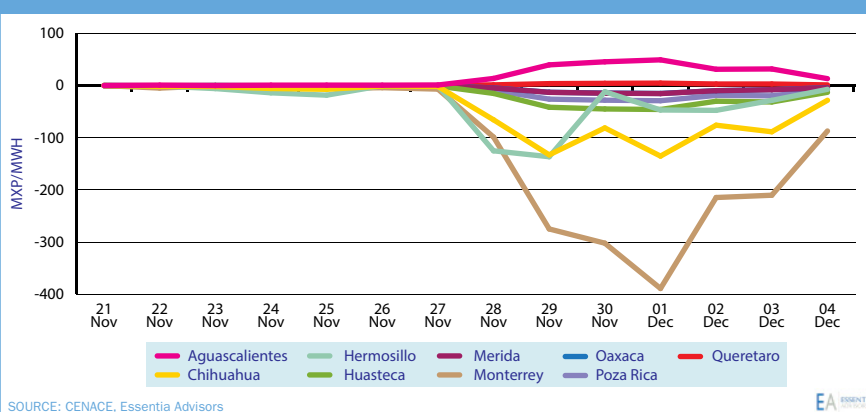
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Contracts for the first half of 2017 sit flat from the last publication, although the Q3 2017 period has been lowered by slightly less than \$1.00/MWh.

Price declines in excess of \$2.00/MWh, or 5% were also seen for the calendar year contracts over the 2019-2021 period.

The latest EKTRIA swap contracts are valid through 20 December. Further information on the swaps contract offer can be found on the EKTRIA [website](http://www.ektria.com) or by contacting EKTRIA by email at trading@ektria.com or by phone at +52 5551251699. james.fowler@icis.com

AVERAGE DAILY CONGESTION COSTS ACROSS SELECTED SIN NODES



SOURCE: CENACE, Essentia Advisors

AVERAGE CONGESTION COSTS ACROSS SELECTED SEN NODES (MXP/MWH)

Congestion	Week 1 average	Week 2 average
Aguascalientes	0.51	32.05
Chihuahua	-2.72	-86.85
Hermosillo	-5.67	-57.66
Huasteca	-0.58	-31.73
Merida	-0.17	-9.99
Monterrey	-3.81	-225.33
Oaxaca	-0.18	-9.83
Poza Rica	-0.35	-19.87
Queretaro	0.05	3.01

Source: CENACE

EKTRIA POWER SWAP OFFERS

Contract Period	Contract Volume (MW)	Energy Component Ask (\$/MWh)
Week 51	25	40.46
Week 52	25	30.19
January '17	25	39.64
February '17	25	43.14
March '17	20	41.53
April '17	20	51.90
May '17	20	53.55
June '17	20	56.80
Q1 '17	20	41.44
Q2 '17	15	54.08
Q3 '17	15	50.20
Q4 '17	15	42.36
Cal '17	10	47.02
Cal '18	5	48.77
Cal '19	5	47.01
Cal '20	5	47.05
Cal '21	5	47.07

Source: Fisterria Energy

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Mexico Energy Report

GAS

Gas network balanced despite LNG delays, maintenance

Gas flows into Mexico appeared relatively steady over the end of November and early December, despite maintenance work on supply infrastructure in both the north and south of the country.

The impression of system balance was supported by the delayed delivery of several LNG cargoes into the Manzanillo terminal on the country's Pacific coast.

The Cheniere-chartered 174,000cbm *Creole Spirit* waited outside the LNG terminal for a period of nearly two weeks before discharging on 6 December, according to the LNG Edge shipping platform.

Similarly, the 155,000cbm *GasLog Saratoga*, which is understood to be chartered to UK-based supplier BP, has been delayed by nearly a week after arriving off the coast of Manzanillo on 1 December. The vessel is expected to complete delivery on 10 December according to port records.

Market sources said the delays were not related to operational problems at the terminal. Likewise maintenance work on pipelines connecting the facility to demand centres across western Mexico have not been reported.

In northern Mexico, state oil company Pemex reported on 2 December the resumption of service to industrial clients and distributors in and around the border city of Matamoros.

The supply of natural gas imported from the US to local distributors MaxiGas, a subsidiary of French energy giant ENGIE, and FINSA was understood to have been cut for several days over the end of November due to scheduled maintenance work.

Further south, Pemex continues to take production facilities off the coast of Veracruz and Tabasco states offline for maintenance, taking advantage of the lower gas demand through the winter months from the power sector.

Cuts of up to 5% of daily production have been seen over recent weeks, equivalent to around 200-300 million cubic feet (mcf), or 5.6-8.5 million cubic metres per day.

The region has been badly impacted by declining offshore production from Pemex fields. Since the middle of 2015, gas supplies to the Yucatan Peninsula through the 300mcf/day Mayakan pipeline have been capped at

less than half of pipeline capacity in order to maintain the supply of natural gas to central regions of Mexico as well as petrochemical plants on the central Gulf coast.

In case of further prolonged cuts in domestic production, the ramp up of flows from the US through the Los Ramones pipeline will likely provide balance to the system. The pipeline has been flowing at around 400mcf/day on average since July this year.

Market sources maintain that flows of 1 billion cubic feet (bcf) per day could be seen before year-end, once work on compression stations in the northern section of the Los Ramones II pipeline is completed.

However, separate market sources have expressed doubt that this will now occur before the start of 2017. Maximum flows of 1.4bcf/day through Los Ramones II are not likely to be achieved until the middle of next year, one market source said. Much of the pipeline's capacity will be made available to consumers through the country's recently launched open season for the reservation of capacity in the Sistrangas pipeline network (see separate story). james.fowler@icis.com

RECENT AND EXPECTED LNG ARRIVALS

Name of Ship	Vessel size (cubic metres)	Contract/Spot	Seller	Port	Date of Arrival
Gaslog Saratoga	155000	Spot	BP	Manzanillo	10/12/16
Creole Spirit	174000	Spot	Cheniere	Manzanillo	05/12/16
Bilbao Knutsen	138000	Spot	Trafigura	Manzanillo	01/12/16
Maran Gas Alexandria	162000	Spot	Vitol	Manzanillo	22/11/16

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TENDERS

GAS PROJECTS

Project	Type	Capacity	Length	Investment (US\$)	Organiser	Deadline	Award	Operation start date
Baja California Sur	Gas transport	90-212 mcf/day	n/a	\$800m	CFE	Jan-17	Jan-17	Jan-20

POWER GENERATION PROJECTS

Project	Type	Capacity	Investment (US\$)	Organiser	Deadline	Award	Operation start date
CC Topolobampo III	Construct and operate	666MW	\$631m	CFE	12/01/17	13/02/17	Dec-19

AWARDED PROJECTS

GAS PROJECTS

Project	Type	Capacity	Awarded party	Investment (US\$)	Operation start date
Villa de Reyes	Gas transport	276 mcf/day	Gas Natural Industrial, GNN	\$7.9m	Dec-16
Tula	Gas transport	505 mcf/day	ATCO	\$65m	Dec-16
San Isidro-Samalayuca	Gas transport	1.135 bcf/day	IEnova	\$147m	Jan-17
Waha-San Elizario	Gas transport	1.135 bcf/day	ETP, MasTec, Carso	\$596m	Jan-17
El Oro-Mazatlan	Gas transport	202 mcf/day	TransCanada	\$400m	Mar-17
Guaymas-El Oro	Gas transport	510 mcf/day	IEnova	\$400m	Mar-17
Ojinaga-El Encino	Gas transport	1.35 bcf/day	IEnova	\$299m	Mar-17
El Encino-La Laguna	Gas transport	1.5 bcf/day	Fermaca	\$530m	Mar-17
Waha-Presidio	Gas transport	1.4 bcf/day	ETP, MasTec, Carso	\$767m	Mar-17
El Encino-Topolobampo	Gas transport	670 mcf/day	TransCanada	\$1bn	Mar-17
Empalme	Gas transport	226 mcf/day	IEnova	\$10.84m	May-17
Samalayuca-Sasabe	Gas transport	472 mcf/day	Carso, IDEAL	\$471m	Nov-17
Hermosillo	Gas transport	100mcf/day	Gas Natural de Noroeste	\$13m	Nov-17
Tuxpan-Tula	Gas transport	886 mcf/day	TransCanada	\$297m	Dec-17
La Laguna-Aguascalientes	Gas transport	1.19 bcf/day	Fermaca	\$372m	Jan-18
Villa De Reyes-Aguascalientes-Guadalajara	Gas transport	886 mcf/day	Fermaca	\$270m	Jan-18
Tula-Villa De Reyes	Gas transport	886 mcf/day	TransCanada	\$336m	Jan-18
Nueces-Brownsville	Gas transport	2.6 bcf/day	Spectra Energy	\$1.55bn	Oct-18
Texas-Tuxpan (submarine)	Gas transport	2.6 bcf/day	IEnova, TransCanada	\$2.1bn	Oct-18

POWER GENERATION PROJECTS

Project	Type	Capacity	Awarded party	Investment (US\$)	Operation start date
CC Norte III	Construct and operate	906MW	Abengoa	\$1.03bn	Nov-17
CC Empalme I	Construction	770MW	Sener, IEPI, OHL	\$476.9m	Nov-17
CC Valle de Mexico II	Construct and operate	615MW	Cobra, Avanzia, Initec	\$425m	Dec-17
CC Empalme II	Construction	723MW	Duro Felguera, Elecnor	\$396m	Apr-18
CG Los Azufres III	Construction	25MW	TSK	\$51.3m	Jun-18
CH Chicoasen II	Construction	240MW	Omega, Sinohydro, CAABSA	\$386m	Jul-18
CC Escobedo	Construct and operate	889MW	Iberdrola	\$374m	Jul-18
CH Temascal	Refurbishment	n/a	Andritz Hydro	\$27m	Sep-18
CC Topolobampo II	Construct and operate	778MW	Iberdrola	\$400m	Jan-19

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AWARDED PROJECTS

POWER TRANSMISSION PROJECTS

Project	Type	Capacity	Length	Awarded party	Investment (US\$)	Operation start date
1120 Noreste	Construction	115kv	27km	Aselec Electricidad	\$6.9m	Dec-16
1902 Noroeste	Construction	400kv/115kv	74km	Ortiz, Juan Galindo, Propiedades Inmobiliarios	\$33.3m	Mar-17
1201 Baja California	Construction	230kv/161kv	31km	Castco, High Tech, R.A Construcciones and others	\$12.5mn	Mar-17
1802 Transmission Norte	Construction	400kv/230kv	159km	Cetana, Soluciones Integrales	\$35.2m	Apr-17
1210 Norte-Noreste	Construction	115kv	39km	EDEMCO and Edemtec	\$9.3m	Jun-17
1905 Sureste	Construction	230kv/115kv	367km	EDEMCO and Edemtec	\$38m	Jul-17
1811 Empalme I	Construction	440kv/230kv	421km	Castco, DINA, High Tech and others	\$86.7m	Aug-17
1302 Noreste	Construction	400kv/115kv	25km	Siemens	\$29.8m	Oct-17
1911 Empalme II	Construction	400kv/230kv	119km	Acciona	\$90m	Nov-17
336 Baja California Sur-Noroeste Phase 1	Construction	230kv/115kv	227km	Control y Montajes Industriales	\$44.5m	Mar-18

CNH UPSTREAM TENDERS

License type	Number of blocks	Deadline
Shallow water exploration and extraction round II	15	24/03/17
Onshore exploration and extraction	12	04/07/17
Onshore exploration and extraction	14	12/07/17

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half of the pipeline's injection point capacity, 1.14m Gigajoules/d (1.08bcf/d), will be available for companies to bid on in the open season.

The second largest source of capacity will be the Kinder Morgan MIER-Monterrey pipeline, which will have 208,000GJ/day available at the injection point, followed by the Gloria de Dios injection point in Chihuahua (128,000GJ/d). Just over 115,000GJ/day will be made available at the El Castillo compression facility, which receives gas imported from the Manzanillo LNG terminal.

In the far south of the Sistrangas system, capacity totalling 95,800 GJ/d is available from two of the three injection points in the region. This region, unlike areas to the north, will see prices continually indexed to the VPM Ciudad Pemex natural gas price, despite the removal of similar price controls elsewhere in the Sistrangas (see *MER 23 November 2016*).

Of the 24 injection points on offer across the network, the most desired are likely to be those which connect the Sistrangas to US pipelines. Among these, market sources expect that the three of highest interest will be Kinder Morgan's MIER-Monterrey pipeline, the Coral pipeline and the Los Ramones pipeline, based on the fact that only capacity held in US intrastate pipelines by Pemex and CFE will be opened up through a second series of auctions held following the closure of the open season (see *MER 9 November 2016*).

SISTRANGAS INJECTION POINTS WITH AVAILABLE CAPACITY

Injection Point	Origin	Location	Capacity available (GJ/d)
Cactus Nuevo Pemex	Domestic	Reforma, CHPS	87,573
Gloria Dios	Import	Juarez, CHI	127,907
Coral	Import	Reynosa, TAMP	81,067
TETCO	Import	Reynosa, TAMP	100,000
Monclava	Domestic	Frontera, COA	2,046
Kinder Morgan Mier Monterrey	Import	Mier, TAMP	208,752
Playuela	Domestic	Alvarado, VCZ	17,485
Mendoza	Domestic	Various, VCZ	51,790
Raudal	Domestic	Nautla, VCZ	15,594
LNG Altamira	Import	Altamira, TAMP	67,139
Camponejo	Domestic	San Fernando, TAMP	79,220
Mareografo	Domestic	China, NL	20,023
Los Ramones	Import	Camargo, TAMP	1,139,385
Poza Rica	Domestic	Poza Rica, VCZ	78,683
La Venta	Domestic	Huimanguillo, TAB	8,220
Matapionche	Domestic	Cotaxtla, VCZ	12,321
El Castillo	Import	El Salto, JAL	115,309

Source: CENAGAS

In these intrastate pipelines, which are located only in Texas, CFE and Pemex collectively holds around 3.5bcf/day of export capacity into Mexico, one market source said.

To release the capacity belonging to Pemex and CFE in interstate pipeline systems such as Spectra Energy's Texas Eastern (TETCO) pipeline system or Kinder Morgan's Tennessee

network, CRE and CENAGAS are required to navigate capacity assignment regulations established by US energy regulator FERC.

While Mexican authorities have not ruled this out in the future, the process could not be completed prior to the launch of the first open season due to the tight timeframes involved. james.fowler@icis.com

CENACE to seek clearing house for future power auctions

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year contracts for the supply of power and capacity. Companies will be able to submit offers to supply energy through three different contract types: baseload, intermediate or peaking. The delivery of power can also be split into distinct periods of the three-year term. The auction will be open to both physical and financial market participants.

Under current timetables, the FTR auction will likely follow the mid-term auction in November next year.

Essentia also said that they expect the first FTR auction to offer the instruments for maximum periods of one year, covering calendar year 2018. CENACE officials have previously said that they envisage FTRs having maximum

annual terms of up to three years.

The idea of FTRs is to allow market participants to hedge against the difference in the congestion price component of the local marginal power price at the nodes of injection and delivery for each of its power supply agreements. Any company delivering power through the transmission system is required to possess sufficient FTRs to cover all their inter-nodal deliveries.

Market sources also say that CENACE plans to hold the first capacity balancing auction in February 2017.

The manual published in September envisages CENACE establishing market participants' capacity requirements by dividing the power

grid into separate geographic zones. For each zone CENACE will then calculate the amount of capacity generating resources in that area have made available at the 100 hours of highest demand of every year.

At the same time, the grid operator will also calculate the amount of capacity load responsible entities have demanded during the same 100 hours of peak demand.

Providers and load responsible entities will then be able to transact capacity on an ex-post bilateral basis, signing coverage contracts registered through CENACE which fulfil the load responsible entity's capacity requirements for the previous year. james.fowler@icis.com

Castleton lands first financial trader license

US trading house Castleton Commodities is the first company to receive permission to participate on Mexico's new deregulated power market as a financial trader.

Official notification of the license approval was given to Castleton on 14 November by Mexico's energy regulator CRE, bringing an end to a licensing process which began in July this year.

The permission, referred to as a *comercializador no suministrador*, allows the company to buy and sell financial instruments.

This means that license holders can transact clean energy certificates (CELS), financial transmission rights (FTRs) as well as TBFIn and TBPot financial hedging contracts.

Financial traders will also be able to sell electricity imported from the US or other markets, as well as exporting power generated in Mexico.

They can also transact *potencia* (capacity) contracts, one market source said.

Financial traders are however barred from representing generators or load consumption centres based in Mexico on any of the domestic physical markets.

This prevents financial traders from transacting power generated in Mexico to domestic consumers.

As of the start of December, six more applications for financial trader licenses have been submitted to the CRE by a mix of Mexican and international companies.

Proposals have been made by Monterrey based ENICON Energy and Infrastructure, IT-Energy de Mexico and Saturnia Energia.

Mexican affiliates of US trading companies Tenaska, BioUrja and Swiss trader Vitol have also submitted applications.

In the power market rules produced by Mexico's energy ministry SENER and CRE in 2015, the term *comercializador* is also mentioned as a type of market participant.

However market sources told ICIS that the only *comercializador* license that will be issued is that of financial trader, and no trading license is to be created for power market participation.

In the rules, the term *comercializador* refers to the activities of both financial traders and qualified and regulated market suppliers (*suministrador calificado* and *suministrador basico*), a source told ICIS.

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CRE reveals CENACE's MEM power bid publication requirements

Terms and conditions for the publication of bids and offers made to Mexico's power market operator CENACE have been published by energy regulator CRE in the official gazette on 6 December.

The rules establish that all bids, sales offers as well as offers to import and export power and other connection services will be made publicly available on the CENACE website for the day-ahead, real-time and hour-ahead power markets, which constitute the larger MEM deregulated market.

The operator will have a 60-day period from the launch of each market to begin publishing the data, though an exemption has been granted for the day ahead market, which is already operational.

Initially, the information will be published on a daily basis using averages for six four-hour blocks starting from midnight as the first hour of the day. After the initial six-month period following the publication of the terms and conditions in the

official gazette, CENACE will begin to publish the data on an hour-by-hour basis. The names of the market participant and the specific generation unit will be encrypted by the regulator, to prevent allegations of market abuse.

Sales offers will be published alongside the generation technology of the unit in question. Buy offers will be submitted by date and demand volume. In each case the relevant load zone will also be listed.

Delays in the publication of these terms and conditions have been cited by sources at CENACE as a reason for the postponed launch of the Market Information System which the operator was supposed to have operational by the end of October.

CENACE had expected to be in a position to publicly list day-ahead bids and offers from individual power plants and load centres on its website by December this year. However, market sources now say that this will be pushed back into 2017. james.fowler@icis.com

CRE publishes pipeline open season exemption rules

Mexico's national energy regulator CRE on 2 December published legislation in the country's official gazette outlining the criteria under which companies developing natural gas pipeline infrastructure in Mexico can be exempted from holding an open season for system capacity.

The legislation aims to clarify uncertainty from the original rules established in the 2014 hydrocarbons law, stating that any transport capacity added to existing infrastructure or through the installation of new projects must be made available to the public through an open season process.

According to the CRE, loopholes had been identified in the terminology of the law which implied that an open season would not have to be held when the new capacity is being developed by an infrastructure operator under their own investment, rather than the investment of a third party. Under the CRE resolution, the regulator makes it clear that exemptions to the requirement of holding an open season only apply when the infrastructure in question is of less than 1,000 metres in length, or when the pipeline is located in zones of either environmental or commercial sensitivity as established by previous laws.

A pipeline operator can also be exempt from holding an open season when it can prove that no potential clients are located within an area composed of a radius three times the length of the pipeline section in question.

The resolution also establishes the evidence that pipeline operators will need to present to

prove that these criteria have been met. CRE also reserves the right to enforce the holding of an open season by the operator should the conditions under which the exemption was granted change.

Distribution modifications

Over the end of November CRE also published three proposals to expand existing natural gas distribution licenses open for public comment on the website of Mexico's regulatory reform agency COFEMER.

Two of the applications relate to distribution concessions in the northern state of Chihuahua. Gas Natural de Juarez, the existing distributor in Ciudad Juarez, is petitioning to expand its distribution concession area to four new municipalities surrounding its existing license area.

Likewise, ECOGAS, a subsidiary of Mexico City headquartered IEnova, is also seeking to expand its existing concession in and around the city of Chihuahua to cover the entirety of the three municipalities it currently distributes gas in.

A separate filing to supply natural gas to a new concession area covering the municipalities of Cuapiaxtla in Tlaxcala State and Rafael Lara Grajales, Nopalucan and San Jose Chiapa in the state of Puebla has meanwhile been submitted by Gas Natural del Noroeste.

Each of the proposals are available for public comment on the COFEMER website until late January 2017. james.fowler@icis.com

Mexico's deepwater licensing round hailed as a success

Mexican government officials were quick to hail as a success the country's latest tender for upstream oil and gas licenses, which closed on 5 December.

Expectations had been high that the deep-water offshore round, dubbed the "jewel in the crown" by officials at energy ministry SENER due to the high prospective resources on offer, would attract significant interest from global oil majors.

In total, eight of the ten licenses offered through the round were awarded. The most successful company proved to be France's Total, which will hold stakes in three separate licenses as part of consortia with US-based ExxonMobil (block 2), Norway's Statoil and UK major BP (blocks 5 and 7).

The only company to secure licenses without partners was China's CNOOC, which was awarded blocks 1 and 4 in the Perdido belt.

Mexican companies were also successful, with state oil company Pemex securing one license through a consortium with US major

Chevron and Japan's INPEX. Independent company Sierra Oil and Gas meanwhile secured stakes in two licenses alongside partner firm PC Carigali, the upstream subsidiary of Malaysia's Petronas. US producer Murphy Oil and London-based Ophir will partner with Sierra and Petronas in one of the license areas.

The awarded bids envisage potential total investments of up to \$34bn, with maximum production across all eight license blocks totalling 776,000 barrels of oil equivalent (boe) per day.

Many market participants believe that the auction results help to underline the credibility of the Mexican energy reform process despite the ongoing uncertainty surrounding the country's relationship with the US since the Presidential election victory of Republican Donald Trump.

The participation of many major international oil companies such as ExxonMobil and Chevron shows the high level of international interest in the opportunities emerging in Mex-

ico; two more majors, Shell and Italy's Eni, also participated in the round without success.

However, the projects are unlikely to provide a short-term solution to the ongoing gas deficit faced by the country.

First production from any of these licenses is not anticipated until the end of the decade at the earliest, and only four of the licenses have been recognised as bearing any natural gas production potential.

Most of the gas in these regions is classed as wet gas, which until now has been used mainly by state oil company Pemex for reinjection into oil reservoirs. However, Mexican authorities hope that growing domestic demand for ethane and other liquids will spur the commercial development of offshore wet gas resources through the coming years.

Trion

In a separate award announced on the same day, state oil company Pemex selected Australian multi-resource company BHP Billiton to develop the deepwater Trion oil field in the first farm-out deal ever concluded by the state company.

Under the contract, BHP Billiton, which beat off competition from BP, will take a 60% operating stake in the block. The company's offer allocates a further 4% royalty payment to the Mexican state on top of the 7.5% minimum.

A total of \$11bn will be invested in the field through the length of the contract. First production is expected in 2023, with peak production anticipated by 2025 at a level of 120,000 boe/day.

Pemex estimates proved plus probable reserves in the region of 485m barrels of crude oil equivalent, at least some of which consists of associated natural gas.

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UPSTREAM AUCTION ROUND 1.4 LICENSE WINNERS

Offshore region	Block	Winner
Perdido belt	1	CNOOC
	2	Total, Exxon Mobil
	3	Chevron, Pemex, Inpex
	4	CNOOC
	5	Satoil, BP and Total
Salinas Basin	6	Unawarded
	7	Satoil, BP and Total
	8	PC Carigali, Sierra
	9	Murphy, Ophir, PC Carigali, Sierra
	10	Unawarded

Source: CNH

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FOR THE RECORD

US gas exports rise on Mexican demand

US natural gas pipeline exports have reached new record levels through 2016 due to growing import demand from Mexico, according to a report released 29 November by the US Energy Information Administration (EIA).

Pipeline exports to Mexico have thus far accounted for more than half of US natural gas exports since April last year, the EIA said.

The administration estimates that 4.2bn cubic feet (bcf) - 119 million cubic metres - per day was exported from the US to Mexico in August.

The 2016 yearly average for pipeline exports to Mexico sits at 3.6bcf/day, which the EIA noted is 25% above the same time last year and 85% above the five-year average.

The EIA noted a level of uncertainty in Mexican demand growth, specifically from the power generation sector.

Though natural gas-fired plants are producing electricity to meet demand, they are still competing with renewable technology and nuclear electricity generation.

The EIA assumes that competition from these sources could slow Mexican demand growth for US natural gas, especially if coupled with a rebound in domestic natural gas production.

SENER publishes clean energy strategy update

Mexico's energy ministry SENER released the first update of its strategy to promote the use of clean energy technologies and fuels, first published in 2015 as part of the energy transition law.

The strategy update, published in the country's official gazette on 2 December, highlights key policies and initiatives to be implemented by regulatory bodies to help achieve goals of producing 35% of all energy generated in Mexico by 2024 from clean energy sources. These goals rise to 37.7% by 2030 and 50% by 2050.

Renewable energy projects such as wind, solar, hydroelectric and geothermal technolo-

gies as well as efficient cogeneration plants are all defined as clean energy sources by the energy transition law.

Mexico's only nuclear energy project, Laguna Verde, is also classified as a source of clean energy generation.

Over 2016, SENER expects these sources to account for 22.4% of gross energy generated in Mexico, up from 20.3% in 2015, with hydroelectric facilities providing just over half of this total.

By 2030, SENER expects renewable energy projects including hydro to represent 68.1% of all clean energy generated in Mexico, nuclear energy 21.7%, efficient cogeneration 10.1% and bioenergy 0.1%.

The strategy also establishes energy efficiency goals over two separate periods, 2016-2030 and 2031-2050.

Over the first period, the intensity of annual energy consumption is to be reduced by around 1.9%, rising to 3.7% over the second period.

CFE reports rising tariffs

Mexico's state utility CFE will raise power tariffs to industrial and commercial users for the fifth time in the last six months, the utility announced on 2 December.

December tariffs for the industrial sector will rise by between 2.6% and 3.6% by comparison with November this year.

Commercial clients of the CFE will see their tariffs rise by between 1.4% and 2.4%, while high consuming residential customers will see tariffs increase by 1.4%.

Tariffs for each of these consumption sectors have increased gradually through the second half of 2016, after falling by up to 40% through 2015.

Low consuming domestic users, close to 99% of Mexican households, will see tariffs unchanged from November once again.

The CFE cited an 87% year-on-year increase in the price of natural gas and a 50% increase in the price of imported coal for the tariff increases.

Both of these fuels are used in the formula employed by Mexico's finance ministry to work out the tariff.

SENER unveils power connection fund

Mexico's energy ministry SENER plans to invest up to Mexican pesos 12 billion (\$582m) over the next five years to bring electricity supply to up to 2 million Mexicans still unconnected to the country's power grids.

The investments, which will be made using a new universal electric service fund (FSUE) will help the government achieve a target of having 99.8% of all Mexicans connected to the power network by 2021. Currently only 98.5% of the country's population receives power from the country's three power networks.

Contributions from participants on the country's new deregulated power market will help fund the FSUE, Mexican energy minister Pedro Joaquin Coldwell said.

Riverstone, Avant agree \$150m credit line

US investment fund Riverstone Holdings has signed a \$150m line of credit with Avant Energy, a new start-up headed by several leading Mexican energy executives, it was announced on 5 December.

The credit line can be extended up to \$300m once the initial \$150m has been invested, Avant Energy said.

Avant Energy will focus on the development, construction and operation of energy infrastructure for Mexico's oil, natural gas, refined product and electricity sector.

The new company is headed by Jaime De La Rosa, the former financial head of Mitsui Power Americas and three former senior executives at Cemex Energy: Jaime Williams, Luis Farias and Antonio Noyola. The company will have offices in Mexico City, Monterrey and Houston.

Riverstone is already active in Mexico as a major shareholder in one of the first independent oil and gas companies active in the country, Sierra Oil and Gas.

Riverstone holds a 42.89% stake in the oil producer, alongside Houston based investment fund EnCap Investments (also 42.89%) and Mexican fund Infraestructura Institucional, a subsidiary of Blackrock, with 14.22%.

Mexico Energy Report

US GAS MARKET

Winter cold snap supports rising US gas futures price

The first sustained stretch of cold temperatures has provided pricing support for US natural gas futures on the NYMEX, despite the market entering into the peak winter demand season with record-high storage levels.

Forecasts at the start of the week of 5 December turned colder for a broad swath of the United States, particularly in the central and northeast regions.

A weather pattern showing a polar vortex from Canada was expected to bring colder temperatures into the Midwest, bolstering heating demand for gas-fired generation. The cold spell marks the first period of prolonged below-normal temperatures this winter. Temperatures for the September through December 2016 period have been above the five-year seasonal norm.

Following the gradual rise in Henry Hub futures prices on the NYMEX, most physical gas hubs in the US were also on the rise.

As of 30 November, Chicago Citygate, PG&E Citygate in California and SoCal Citygate

all increased by between \$0.41-0.68/MMBtu week-over-week, according to the US Energy Information Administration (EIA).

The December '16 Henry Hub futures contract on the NYMEX expired at \$3.23/MMBtu on 28 November. The January '17 contract has gained about \$0.12/MMBtu in value since 29 November. The January '17 contract closed at \$3.44/MMBtu on 6 December, closing lower by less than \$0.02/MMBtu on unchanged weather forecasts.

Infrastructure expansions continue to come online, increasing gas supplies to new markets within the domestic US. On 28 November, the Federal Energy Regulatory Commission (FERC) issued an approval for the expansion of pipeline company Tallgrass Energy's Rockies Express.

The east-to-west expansion project is slated to bring gas from Ohio to Indiana, Illinois and Missouri, increasing capacity to 2.6 billion cubic feet (bcf), or about 73.6 million cubic metres, per day, according to the EIA.

The Cheniere-operated Sabine Pass plant in Louisiana has exported a new record high of 10 cargoes during the month of November, with both trains 1 and 2 producing at name-plate capacity. Commissioning efforts are also underway for Sabine Pass Train 3.

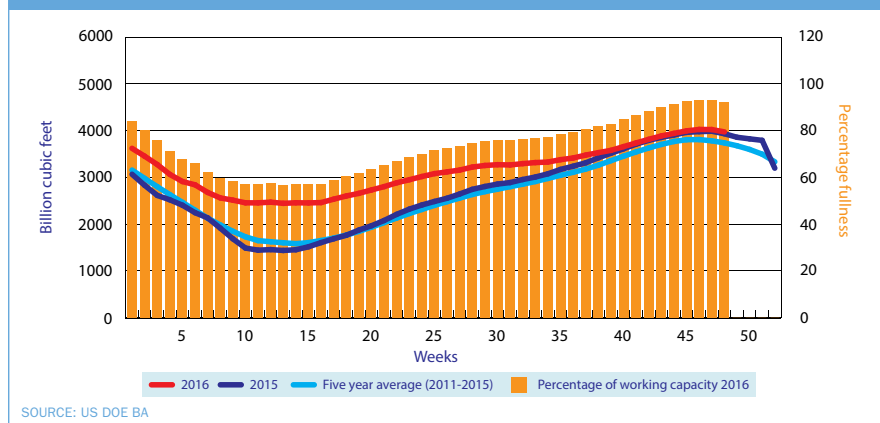
Feedgas into the Creole Trail pipeline, one of the pipelines that carries natural gas into Sabine Pass, have reached an all-time high for the year since the liquefaction plant began producing.

As of 6 December, about 1.02m Dekatherms (Dth)/day, or about 28.2mcm/day, were scheduled in pipeline nominations to Sabine Pass, according to pipeline data.

This is an increase of 23% in volumes from the same time a month earlier.

According to the EIA, the US was a net exporter of natural gas for LNG and to Mexico as of 30 November. Natural gas pipeline exports to Mexico were relatively flat for the week ending 30 November, up 1%, the EIA said. ruth.liao@icis.com

US LOWER 48 GAS STOCKS



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