



GALO Energy

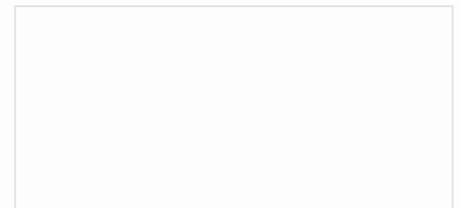
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First Long Term Auction Special Report





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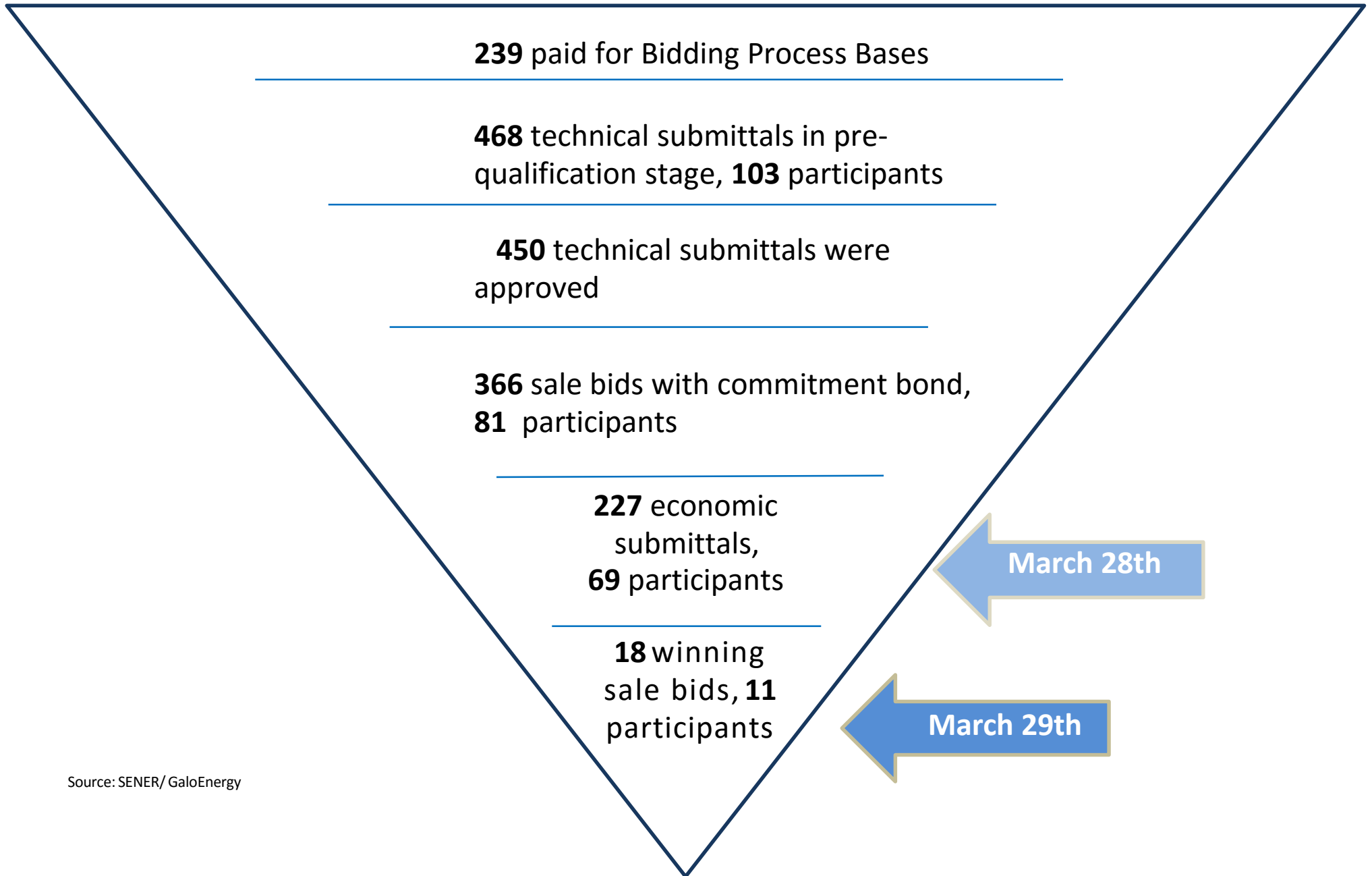
Content:

First Long-Term Auction in the Mexican Wholesale Electricity Market

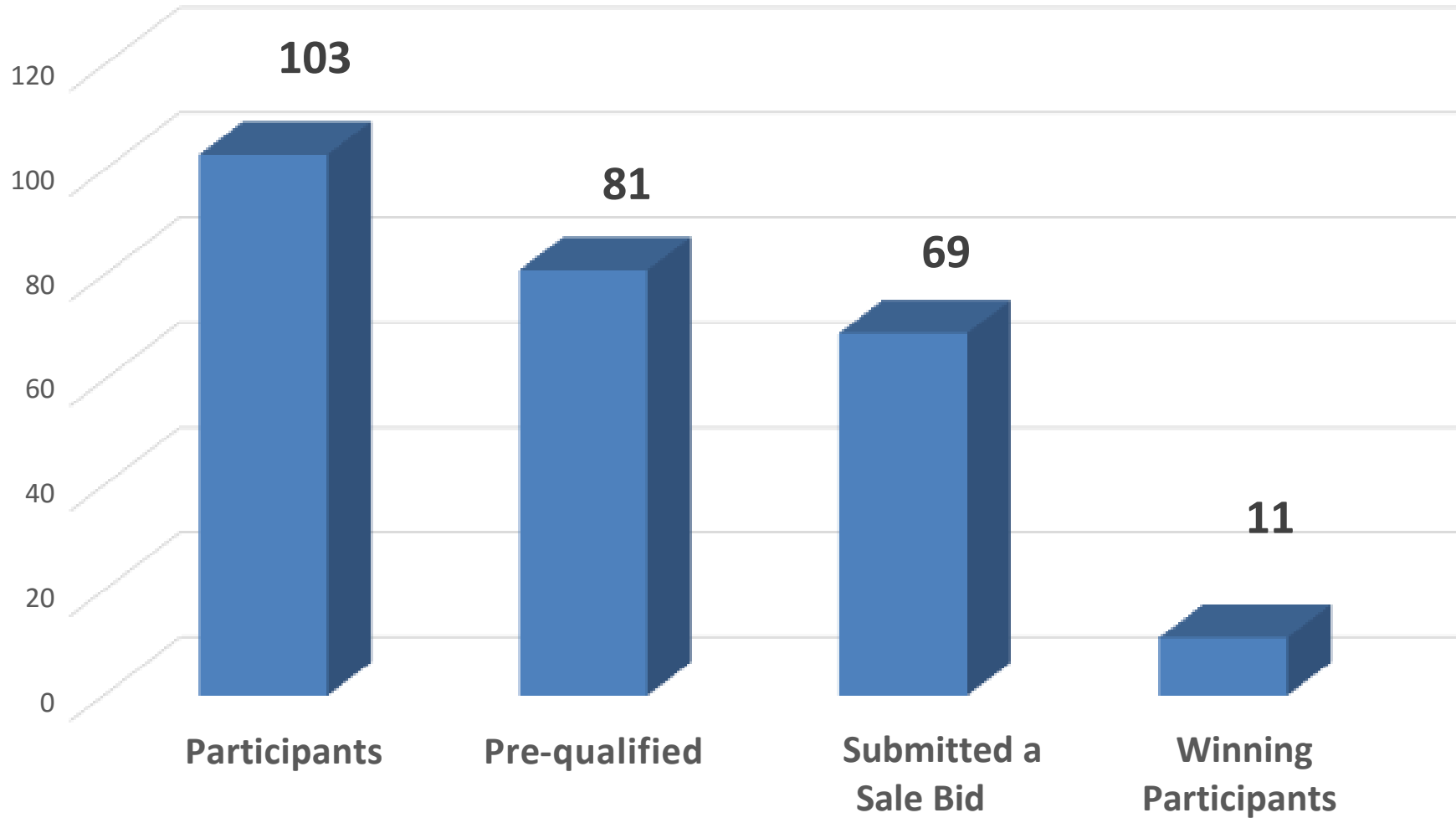


First Long Term Auction in the Mexican Wholesale Electricity Market

- On March 31st the National Center for Energy Control (ISO) awarded long term power contracts to **11 companies** that presented in total **18 winning power sale bids**.
- The winning bids stood out among **69 participants** and a total of **227 bids** that were submitted to CENACE on March 28th.
- The process covered future power demand requirements for the basic service suppliers (distribution companies currently CFE only) as well as clean energy certificates required to cover clean energy obligations by Mexican regulation.
- The auction awarded **5 million 402 thousand 880.5 MWh of energy** and **5 million 380 thousand 911 clean energy certificates CEL's** (1 CEL per clean MWh).
- **Projects range from 18 to 500 MW** and are located in the following Mexican states: Yucatán, Coahuila, Guanajuato, Tamaulipas, Jalisco, Aguascalientes and Baja California Sur.

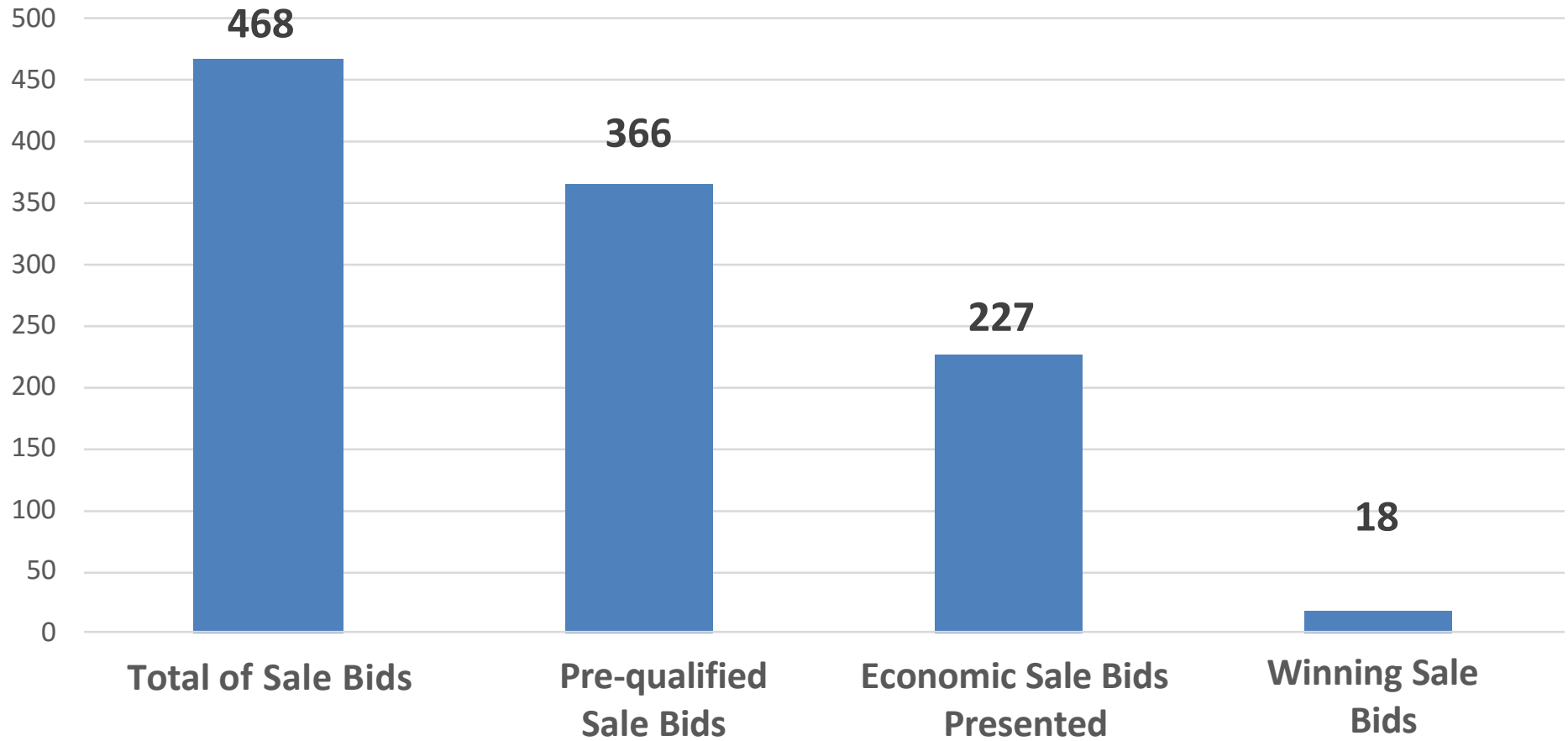


Process: Total Participants 103



Source: SENER

Process: Final Sale Bids



Source: SENER



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Required Products by CFE (Purchase Bid)



Required Products by CFE

- On January 20th, 2016 CFE submitted its first “Purchase Bid” requiring the following products:
 - A) Capacity
 - B) Energy
 - C) Clean Energy Certificates

CFE Purchase Bid		
Product	Max. Price Offered	Purchase Offer (Total)
Capacity	\$573.72 USD	500 MW
Clean Energy Certificates	\$25.47 USD	6,361,250 CELs
Energy	\$50.71 USD	6,361,250 MWh

Source: GaloEnergy



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Sale Products Offered (Winning Bids)



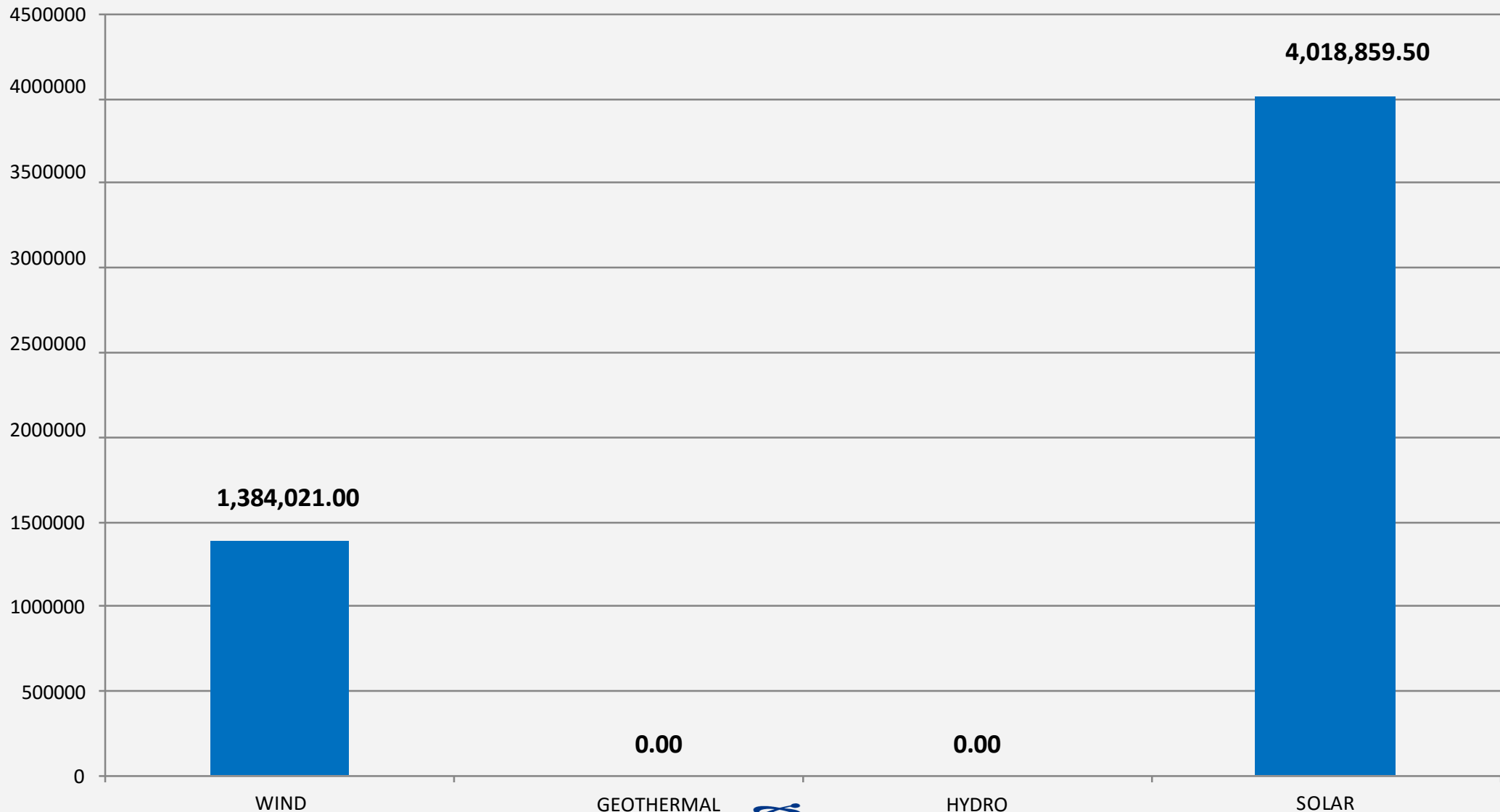
Winning Sale Bids MWh-CELS

Corporate Name	Bid	Capacity	MWh/year	CELS/year	Sale Bid	Technology	Plant Capacity MW	MXN /MWh	USD/MWh
SunPower Systems México, S. de R.L. de C.V.	SLP2015010018-03	-	269,155.00	263,815	204,933,000	PV SOLAR	100	761.39	43.68
Enel Green Power México S. de R.L. de C.V.	SLP2015010059-27	-	972,915.00	972,915	597,503,000	PV SOLAR	330	614.14	35.23
Enel Green Power México S. de R.L. de C.V.	SLP2015010059-31	-	737,998.00	737,998	489,681,000	PV SOLAR	250	663.53	38.07
Enel Green Power México S. de R.L. de C.V.	SLP2015010059-45	-	539,034.00	539,034	421,005,000	PV SOLAR	207	781.04	44.81
Energía Renovable de la Península, S.A.P.I. de C.V.	SLP2015010134-03	-	275,502.00	275,502	314,424,000	WIND	90	1141.28	65.48
Recurrent Energy Mexico Development, S. de R.L. de C.V.	SLP2015010148-01	-	140,970.00	140,970	116,936,169	PV SOLAR	63	829.51	47.59
Aldesa Energías Renovables, S.L.U.	SLP2015010160-01	-	113,199.00	113,199	117,086,000	WIND	30	1034.34	59.34
Aldesa Energías Renovables, S.L.U.	SLP2015010160-02	-	117,689.00	117,689	121,730,000	WIND	30	1034.34	59.34
Vega Solar 1, S.A.P.I. de C.V.	SLP2015010319-01	-	493,303.00	483,515	478,076,000	PV SOLAR	500	969.13	55.60
Vega Solar 1, S.A.P.I. de C.V.	SLP2015010319-02	-	246,832.00	241,935	249,047,000	PV SOLAR	500	1008.97	57.89
Jinkosolar Investment Pte. Ltd.	SLP2015010331-01	-	277,490.00	277,490	226,976,000	PV SOLAR	100	817.96	46.93
Jinkosolar Investment Pte. Ltd.	SLP2015010331-03	-	176,475.00	176,475	178,133,000	PV SOLAR	70	1009.40	57.91
Jinkosolar Investment Pte. Ltd.	SLP2015010331-06	-	48,748.00	48,748	53,448,000	PV SOLAR	18	1096.41	62.90
Photoemeris Sustentable	SLP2015010350-01	-	54,974.50	53,477	64,308,000	PV SOLAR	30	1169.78	67.11
Energía Renovable del Istmo II	SLP2015010378-03	-	585,731.00	0	233,255,000	WIND	168	398.23	22.85
Energía Renovable del Istmo II	SLP2015010378-04	-	0	585,731	201,444,000	WIND	168		
Sol de Insurgentes S. de R.L. de C.V.	SLP2015010445-03	-	60,965.00	60,518	50,500,800	PV SOLAR	23	828.36	47.52
Consorcio Energía Limpia 2010	SLP2015010455-02	-	291,900.00	291,900	338,332,000	WIND	76	1159.07	66.50
			5,402,880.50	5,380,911	4,456,817,969				

Source: SENER/ GaloEnergy

Total MWh of Winning Sale Bids

Energy (MWh) Assigned by Technology



Total CEL Units of Winning Sale Bids

Clean Energy Certificates (CEL) Assigned by Technology



Total Assigned Products in Final Auction Results



	TYPE (KIND)	TOTAL ASSIGNED	PERCENTAGE (%)
ITER:0	CAPACITY	0.00MW	0%
	ENERGY	5,385.72 GWh	84.66%
	CELS	5,426,458.00 CEL	85.30%

Optimization Model Result (Auction)		
Target Economic Benefit (%):		Final Economic Benefit Result With Winning Bids
8.52%	<	39.43%

Source: SENER



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Auction Price Comparisons: Latin America



Latin American Auction Price Comparisons

Auction Price			
Country	Auction (Min-Max US\$/MWh)	Average (US\$/MWh)	Technology
Peru	2nd auction 118.00 - 297.00	198.33	PV Solar
	3rd auction 50.50 - 75.00	67.25	Hydro
	4th auction 47.00 - 80.00	60.08	PV Solar

Auction Price				
Country	Year	(Min-Max US\$/MWh)	Average (US\$/MWh)	Technology
Brazil	2014		55	PV Solar
	2015	74.00 - 97.86	77.49	PV Solar

Auction Price				
Country	Year	(Min-Max US\$/MWh)	Average (US\$/MWh)	Technology
Chile	2013		130	PV Solar/ Wind
	2014	79.88 - 119.90	103	PV Solar/ Wind
	2015	64.84 - 97.00	77	PV Solar/ Wind

Auction Price				
Country	Auction	(Min-Max US\$/MWh)	Average (US\$/MWh)	Technology
Mexico	1st auction	22.85 - 67.11	51.69	PV Solar/ Wind

Source: GaloEnergy



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Conclusions



First Long Term Auction in the Mexican Wholesale Electricity Market

- **Political Pressure:** Considering the very short time that CANCE has had to transform the Mexican Dispatch/ISO into an operating market with short, mid and long term products the results of the auction are not bad. CENACE has developed the auction mechanisms in tandem with the operation of the Wholesale Electricity Market which presents considerable technical challenges.
- **Technical Difficulties:** The auction had technical problems (incorrect bidding by one participant) that required a “re-calculation” by the auction optimization function. This in turn “changed” the universe of winning bids and companies. The bidding companies that were turned down as a product of this second iteration have a legal cause to sue their “unjust” elimination. We shall see the final result of this.
- **Low Prices:** The price range (Min-Max) observed in the Mexican Auction is quite low (\$USD 22.85-67.11) compared to any auction in the relevant power markets of Latin America. Even compared to the lowest observed in Peru (\$USD 47-80) this year.

First Long Term Auction in the Mexican Wholesale Electricity Market

- **Capex is the Key:** According to our sources in some of the winning companies the possibility to bring down the project CAPEX, “crunching” the final price for technology/equipment acquisition (mostly solar PV equipment) through third party supplier bidding procedures, allowed them to reach those bid prices.
- **Latin American Portfolio:** Additionally, the Latin American broad “portfolio” view allowed them to diversify the capital risk in several markets (Peru and Brazil for example) and achieve considerable capital efficiencies.
- **Galo Energy Perspective:** It is to our knowledge that these projects have a return margin. However, Galo Energy believes (through our project development and participation experience in Mexico) that even though the CAPEX achieved could be quite low there can be serious problems along the way if the construction/implementation risks were not rightly valued in Mexico (land acquisition, social impact assessment, interconnection requirements, etc.).

Mexican Long Term Auction: Outline of Final Results

	CAPACITY (MW)	ENERGY (MWh)	CLEAN ENERGY CERTIFICATES (CEL)
CFE PURCHASE BID	500.00	6,361,250.00	6,361,250.00
% ASSIGNED IN WINNING BIDS	0.00%	84.42%	84.08%
TOTAL SOLAR		4,018,859.50	3,996,890.00
TOTAL WIND		1,384,021.00	1,384,021.00
% SOLAR		74.38%	74.28%
% WIND		25.62%	25.72%

Source: SENER/ GaloEnergy



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Annex I



Incorrect Bid by Gestamp



Winning Sales Bids SLP-01/2015						
#	Sales Bid	Corporate Name	Capacity	Energy	CELS	Price (MXN)
1	SLP2015010148-01	Recurrent Energy Mexico Development S. de R.L. de C.V	0	140,970.00	140,970	116,936,169.19
2	SLP2015010072-01	Parque Eólico Reynosa III S.A.P.I de C.V.	0	1,617,376.00	1,617,376	1,243,115,193.60
3	SLP2015010018-03	Sunpower Systems México S. de R.L. de C.V.	0	269,155.00	263,815	204,932,823.00
4	SLP2015010378-03	Energía Renovable del Istmo II, S.A. de C.V.	0	585,731.00	0	233,254,957.78
5	SLP2015010378-04	Energía Renovable del Istmo II, S.A. de C.V.	0	0	585,731	201,444,454.56
6	SLP2015010059-27	ENEL GREEN POWER MÉXICO S. DE R.L. DE C.V.	0	972,915.00	972,915	597,503,346.00
7	SLP2015010059-31	ENEL GREEN POWER MÉXICO S. DE R.L. DE C.V.	0	737,998.00	737,998	489,680,736.00
8	SLP2015010119-01	Gestamp Wind México II, S.A.P.I. de C.V.	0	154,600.00	154,600	1,106.68
9	SLP2015010186-01	ALTEN ENERGÍA RENOVABLES MÉXICO CINCO, S.A. de C.V.	0	367,936.00	20,000	140,394,883.00
10	SLP2015010186-02	ALTEN ENERGÍA RENOVABLES MÉXICO CINCO, S.A. de C.V.	0	0	364,015	169,623,458.00
11	SLP2015010059-45	ENEL GREEN POWER MÉXICO S. DE R.L. DE C.V.	0	539,034.00	539,034	421,005,400.00

Source: SENER

Gestamp incorrectly bid a price per “UNIT” MWh instead of “annual” total production. This resulted in a “re-optimization 2nd iteration” that brought new winners and losers with the legal consequences that can bring forward in the short term.

Preliminary List of Winning Bids with Gestamp Mistake

Winning Sales Bid SLP-01/2015							GaloEnergy	
#	Sales Bid	Corporate Name	Capacity	Energy	CELS	Price (MXN)	Pesos MWh	USD MWh
1	SLP2015010148-01	Recurrent Energy Mexico Development S. de R.L. de C.V	0	140,970.00	140,970	116,936,169.19	829.51	47.59
2	SLP2015010072-01	Parque Eólico Reynosa III S.A.P.I de C.V.	0	1,617,376.00	1,617,376	1,243,115,193.60	768.60	44.10
3	SLP2015010018-03	Sunpower Systems México S. de R.L. de C.V.	0	269,155.00	263,815	204,932,823.00	761.39	43.68
4	SLP2015010378-03	Energía Renovable del Istmo II, S.A. de C.V.	0	585,731.00	0	233,254,957.78	398.23	22.85
5	SLP2015010378-04	Energía Renovable del Istmo II, S.A. de C.V.	0	0	585,731	201,444,454.56		
6	SLP2015010059-27	ENEL GREEN POWER MÉXICO S. DE R.L. DE C.V.	0	972,915.00	972,915	597,503,346.00	614.14	35.23
7	SLP2015010059-31	ENEL GREEN POWER MÉXICO S. DE R.L. DE C.V.	0	737,998.00	737,998	489,680,736.00	663.53	38.07
8	SLP2015010119-01	Gestamp Wind México II, S.A.P.I. de C.V.	0	154,600.00	154,600	1,106.68	139.70	8.01
9	SLP2015010186-01	ALTEN ENERGÍA RENOVABLES MÉXICO CINCO, S.A. de C.V.	0	367,936.00	20,000	140,394,883.00	381.57	21.89
10	SLP2015010186-02	ALTEN ENERGÍA RENOVABLES MÉXICO CINCO, S.A. de C.V.	0	0	394,015	169,623,458.00		
11	SLP2015010059-45	ENEL GREEN POWER MÉXICO S. DE R.L. DE C.V.	0	539,034.00	539,034	421,005,400.00	781.04	44.81



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