

# MSCP Market Watch

Fourth Quarter (Oct-Dec) 2016

Issue 42

Table 1: Indicators of Market Performance

	2015	2016	
	Q4	Q3	Q4
<b>Price Indicators</b>			
<i>Energy (\$/MWh)</i>			
- USEP	61.45	69.26	77.77
- WEP	61.62	69.65	78.05
- Allocated Vesting Price	133.95	128.40	126.44
- LNG Vesting Price	138.73	134.28	130.39
- Balance Vesting Price	127.51	112.71	116.26
<i>Ancillary Services (\$/MWh)</i>			
- Primary Reserve	0.07	0.06	0.11
- Secondary Reserve	0.23	0.19	0.31
- Contingency Reserve	6.37	6.27	5.27
- Regulation	22.13	8.05	8.03
HSFO Spot (US\$/barrel)	35.81	40.42	48.65
<b>Demand Indicators</b>			
<i>Forecast Demand (MW)</i>			
- Average	5,524	5,776	5,710
- Peak	6,656	6,807	6,782
<i>Metered Energy (MW)</i>			
- Average	5,419	5,663	5,596
- Peak	6,578	6,764	6,699
<b>Supply Indicators</b>			
Average Supply (MW)	7,899	8,106	7,907
Supply Cushion (%)	30.03	28.72	27.79
<i>Capacity Ratio (%)</i>			
- CCGT	61.03	59.71	58.63
- OCGT	0.00	0.18	0.08
- OT	52.34	46.53	47.69
- ST	0.14	0.44	0.91
<i>Total Outages (MWh Cumulative)</i>			
- Planned	1,888,037	2,940,215	2,075,932
- Forced	157,675	50,143	95,369
Offers made at or below \$100/MWh (%)	76.17	75.67	76.57

## Market Performance

The Uniform Singapore Energy Price (USEP) increased 12.29 percent, from \$69.26/MWh in Q3 2016 to \$77.77/MWh in Q4 2016. The Wholesale Electricity Price (WEP) increased 12.06 percent, from \$69.65/MWh in Q3 2016 to \$78.05/MWh in Q4 2016.

In Q4 2016, the Allocated Vesting Price and the LNG Vesting Price dropped by 1.53 and 2.90 percent respectively, while the Balance Vesting Price increased by 3.15 percent for the second consecutive quarter to \$116.26/MWh.

The ancillary services market saw a mixed price movements this quarter. Primary and secondary reserve prices moved up by 68.22 and 60.04 percent respectively; contingency reserve price declined 15.96 percent to \$5.27/MWh.

The High Sulphur Fuel Oil (HSFO) spot price rose 20.36 percent from US\$40.42/barrel in Q3 2016 to US\$48.65/barrel in Q4 2016.

Demand slid 1.16 percent to 5,710 MW and supply shrank 2.46 percent to 7,907 MW. The supply cushion, which measures supply adequacy, decreased 0.93 percentage points from 28.72 percent in Q3 2016 to 27.79 percent in Q4 2016.

Changes in the capacity ratios of the various generation types were varied. The capacity ratios of CCGT and OCGT fell 1.08 and 0.10 percentage points respectively while those of OT and ST increased 1.16 and 0.47 percentage points respectively.

Planned outage volume dropped 29.40 percent to 2,075,932 MWh in Q4 2016. But there was a higher volume of forced outage this quarter, at 95,369 MWh.

Overall, the percentage of offers made at or below \$100/MWh grew 0.90 percentage point to 76.57 percent in Q4 2016.

The Market Surveillance and Compliance Panel (MSCP) issued four rule breach determinations in Q4 2016 against:

- i. Senoko Energy Pte Ltd for its failure to comply with gate closure rules on 22 May 2016; and
- ii. Tuas Power Generation Pte Ltd for its failure to comply with gate closure rules on 28 June 2016; and
- iii. Energy Market Co Pte Ltd for its failure to release real-time dispatch schedule and short-term schedule to the PSO on 22 August 2016; and
- iv. Shell Eastern Petroleum (Pte) Ltd for its failure to comply with the declared quantity rules and submit offer variations to reflect generation capability and non-cooperation during initial stage of investigation.

MSCP dismissed two appeals over penalties imposed under the Automatic Financial Penalty Scheme.

# Supply Indicators

Chart 1: Capacity Ratio of Generation Plants

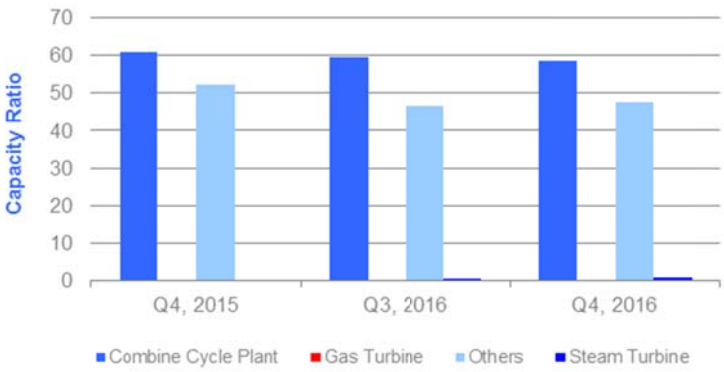


Chart 2: Relationship between USEP and Energy Supply Cushion - Q4 2016

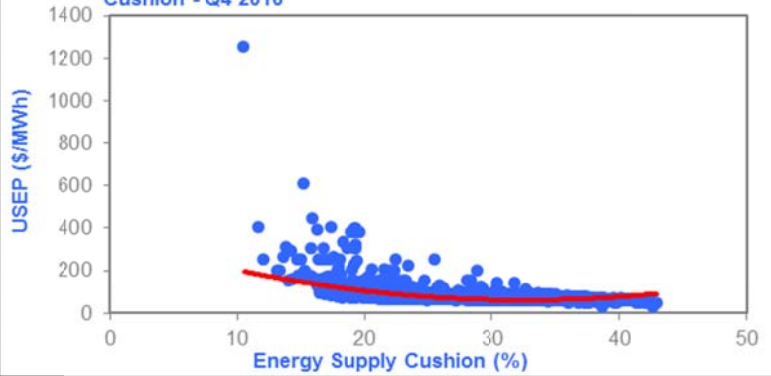


Chart 3: Comparison of Average Market Share by Generation Company Q4 2016

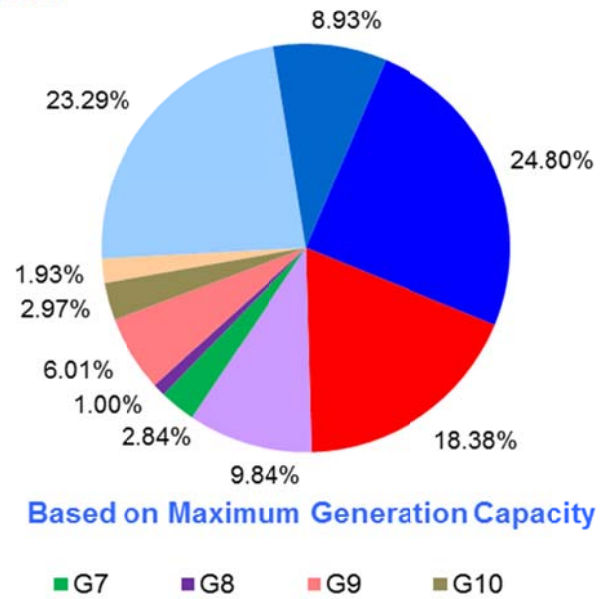
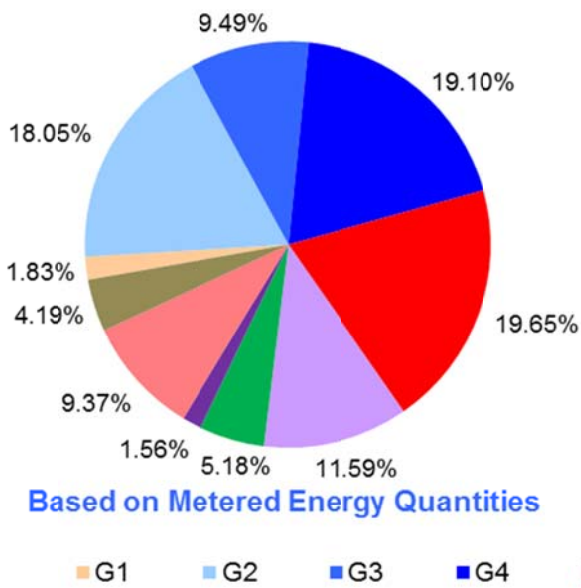
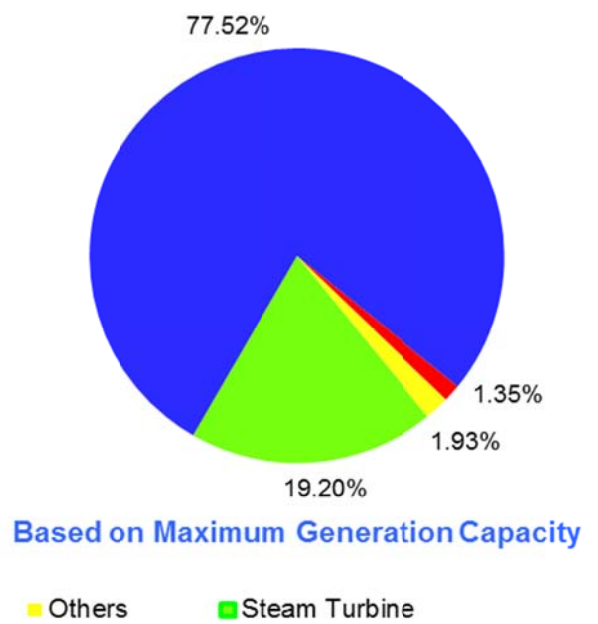
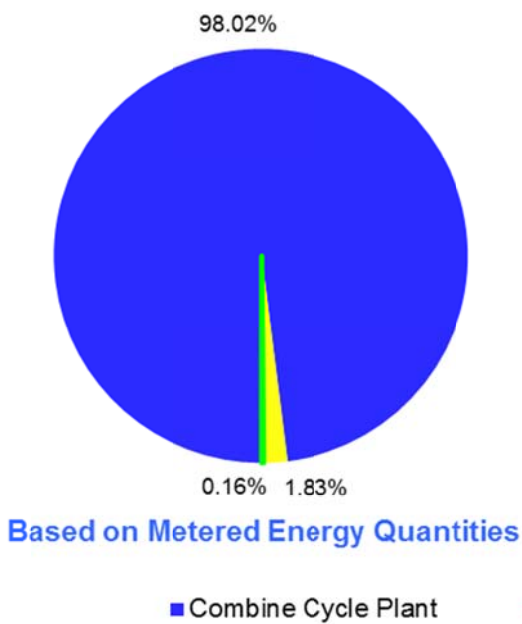
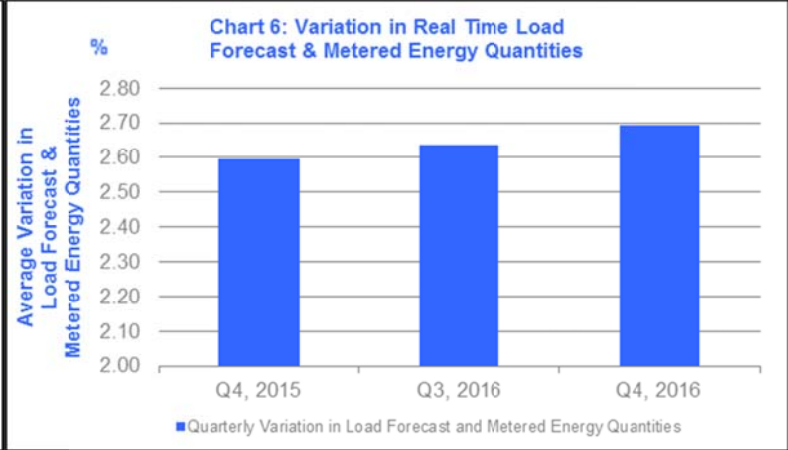
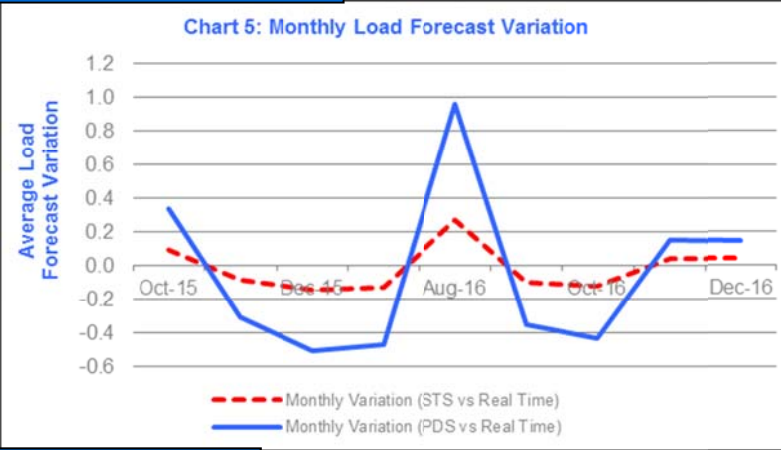


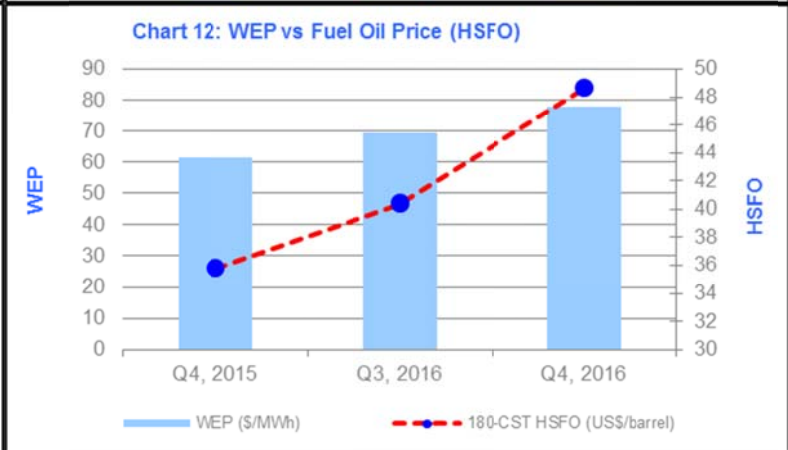
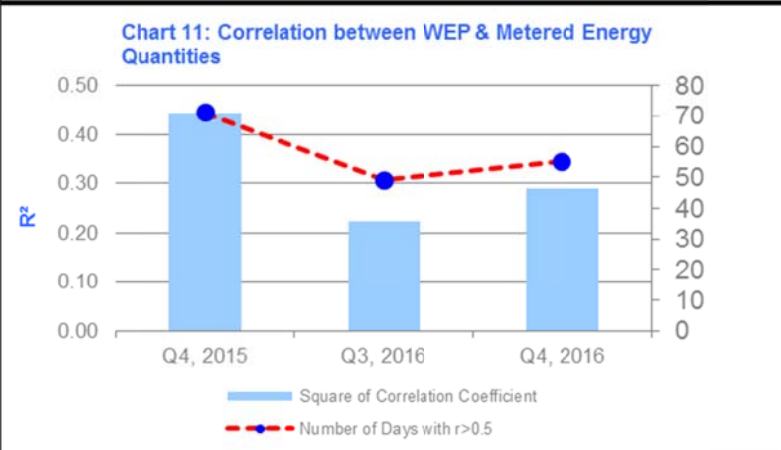
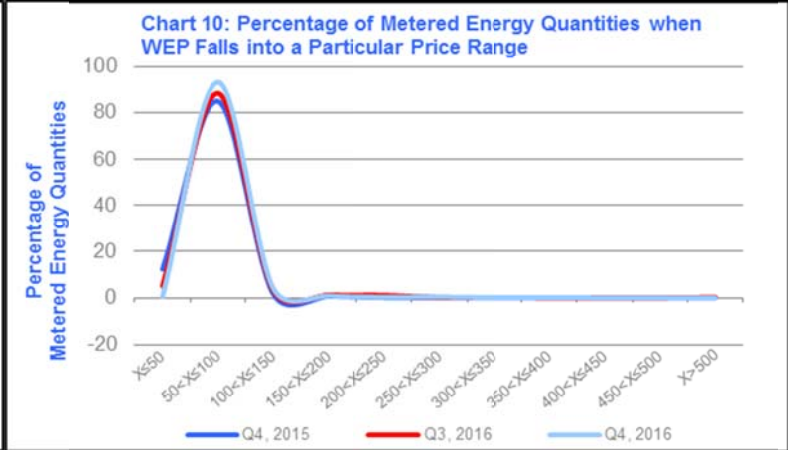
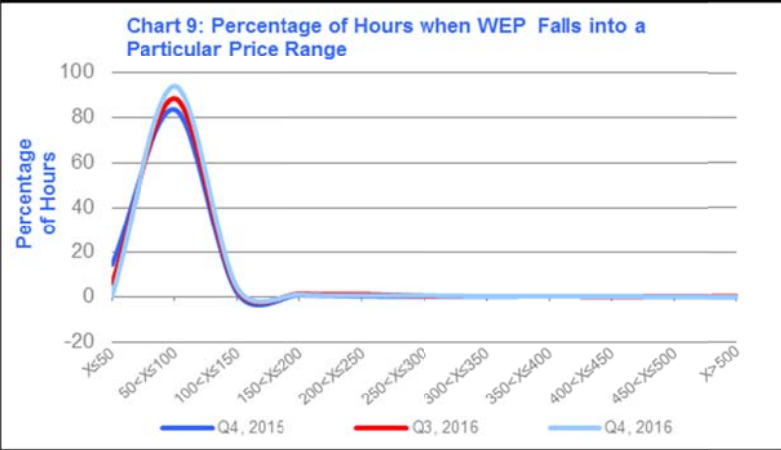
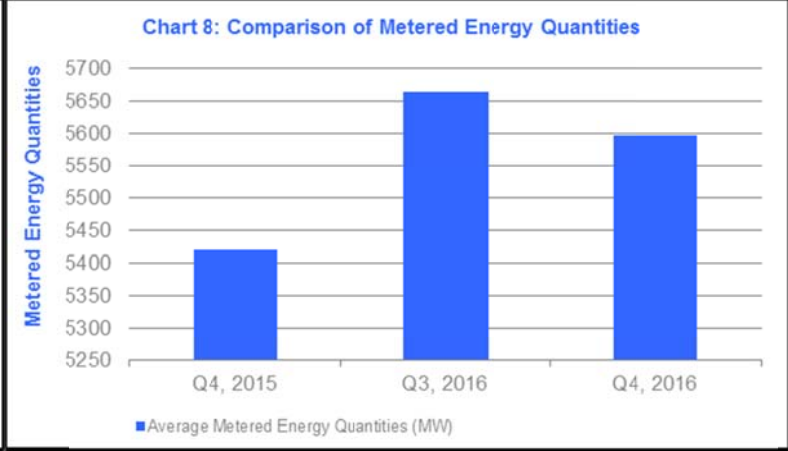
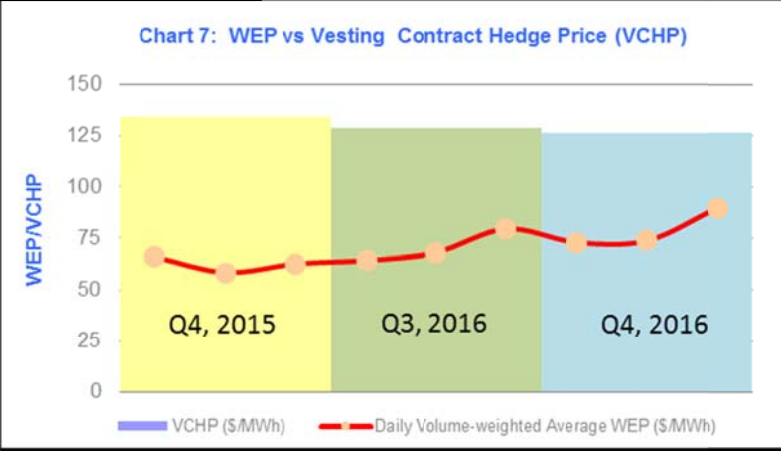
Chart 4: Comparison of Average Market Share by Generation Type Q4 2016



# Demand Indicators



# Energy Prices



## Ancillary Services Prices

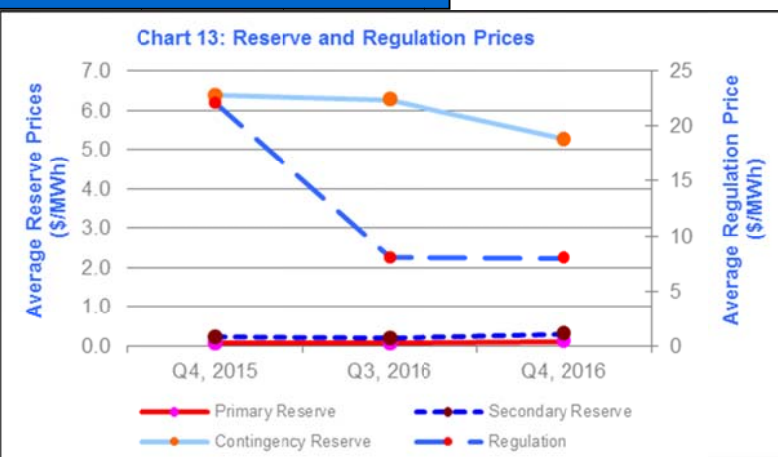


Table 2: Compliance Statistics for Q4 2016

<b>No. of cases of potential rule breaches</b>	<b>195</b>
Self-reports	1
Referrals/Complaints	194
MSCP initiatives	0
<b>No. of determinations</b>	<b>176</b>
Rule breach	4
No rule breach	162
No further action	10
<b>Enforcement</b>	<b>4</b>
No. of cases with enforcement action	4
-Financial penalty	3
-Letter of non-compliance	1
Total amount of financial penalties	\$13,000
Total amount of costs	\$11,500

A User Guide on terms used in this publication is available for download from the Energy Market Company website at [www.emcsg.com](http://www.emcsg.com).

The Market Surveillance and Compliance Panel is comprised of the following persons:

- T P B Menon, Chair
- Lee Keh Sai
- Philip Chua
- Professor Euston Quah
- Professor Walter Woon

It is supported by the Market Assessment Unit of Energy Market Company.