

MSCP Market Watch

Third Quarter (Jul-Sep) 2016

Issue 41

Table 1: Indicators of Market Performance

	2015 Q3	2016 Q2 Q3	
Price Indicators			
<i>Energy (\$/MWh)</i>			
- USEP	130.32	49.42	69.26
- WEP	129.47	49.90	69.65
- Allocated Vesting Price	153.67	111.86	128.40
- LNG Vesting Price	157.77	118.53	134.28
- Balance Vesting Price	144.49	100.01	112.71
<i>Ancillary Services (\$/MWh)</i>			
- Primary Reserve	0.02	0.26	0.06
- Secondary Reserve	0.05	0.26	0.19
- Contingency Reserve	11.88	3.64	6.27
- Regulation	14.16	6.83	8.05
<i>HSFO Spot (US\$/barrel)</i>	43.42	36.14	40.42
Demand Indicators			
<i>Forecast Demand (MW)</i>			
- Average	5,660	5,773	5,776
- Peak	6,684	6,846	6,807
<i>Metered Energy (MW)</i>			
- Average	5,561	5,652	5,663
- Peak	6,621	6,766	6,764
Supply Indicators			
<i>Average Supply (MW)</i>	7,906	8,328	8,106
<i>Supply Cushion (%)</i>	28.40	30.67	28.72
<i>Capacity Ratio (%)</i>			
- CCGT	63.92	61.58	59.71
- OCGT	0.45	0.11	0.18
- OT	52.39	48.86	46.53
- ST	0.43	0.16	0.44
<i>Total Outages (MWh Cumulative)</i>			
- Planned	2,145,526	2,012,188	2,940,215
- Forced	17,336	17,299	50,143
<i>Offers made at or below \$100/MWh (%)</i>			
	73.24	75.87	75.67

Market Performance

The Uniform Singapore Energy Price (USEP) increased 40.15 percent, from \$49.42/MWh in Q2 2016 to \$69.26/MWh in Q3 2016. By the same token, the Wholesale Electricity Price (WEP) increased 39.59 percent, from \$49.90/MWh in Q2 2016 to \$69.65/MWh in Q3 2016.

In Q3 2016, all vesting prices increased for the first time since Q3 2015. The Allocated Vesting Price showed the largest change; it rose 14.79 percent to \$128.40/MWh in Q3 2016.

Price movements of the ancillary services were mixed this quarter. Primary reserve price declined 74.98 percent to \$0.06/MWh; contingency reserve price increased 72.31 percent to \$6.27/MWh.

The High Sulphur Fuel Oil (HSFO) spot price rose 11.85 percent from US\$36.14/barrel in Q2 2016 to US\$40.42/barrel in Q3 2016.

Demand grew 0.19 percent to 5,663 MW and supply shrank 2.67 percent to 8,106 MW. The supply cushion, which measures supply adequacy, decreased 1.95 percentage points from 30.67 percent in Q2 2016 to 28.72 percent in Q3 2016.

The changes in the capacity ratios of the various generation types were varied. The capacity ratios of CCGT and OT fell 1.87 and 2.34 percentage points respectively while those of OCGT and ST increased 0.07 and 0.27 percentage points respectively.

Planned outage volume increased 46.12 percent to 2,940,215 MWh in Q3 2016. There was also a greater volume of forced outage this quarter, at 50,143 MWh.

Overall, the percentage of offers made at or below \$100/MWh slipped 0.20 percentage point to 75.67 percent in Q3 2016.

The Market Surveillance and Compliance Panel (MSCP) did not issue any rule breach determination in Q3 2016.

Supply Indicators

Chart 1: Capacity Ratio of Generation Plants

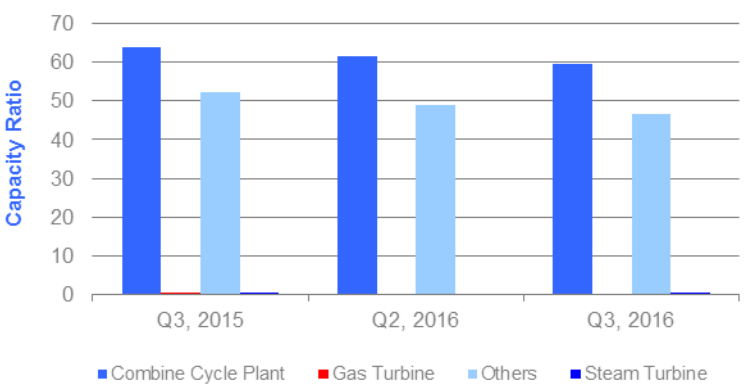


Chart 2: Relationship between USEP and Energy Supply Cushion - Q3 2016

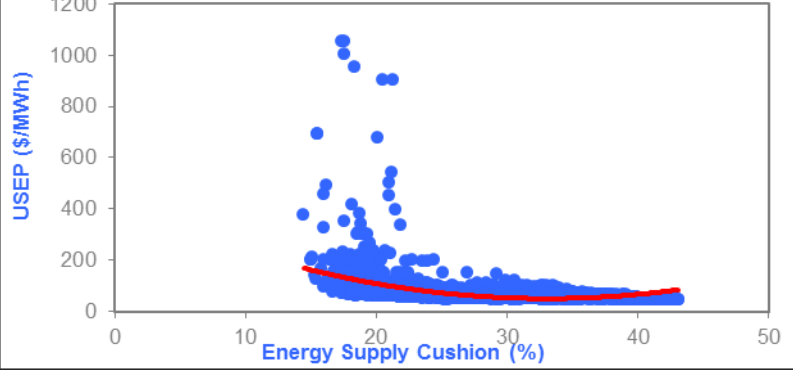


Chart 3: Comparison of Average Market Share by Generation Company Q3 2016

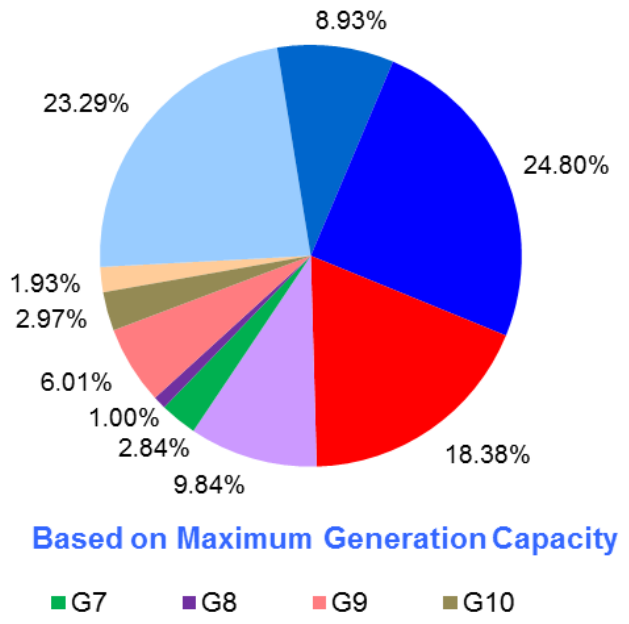
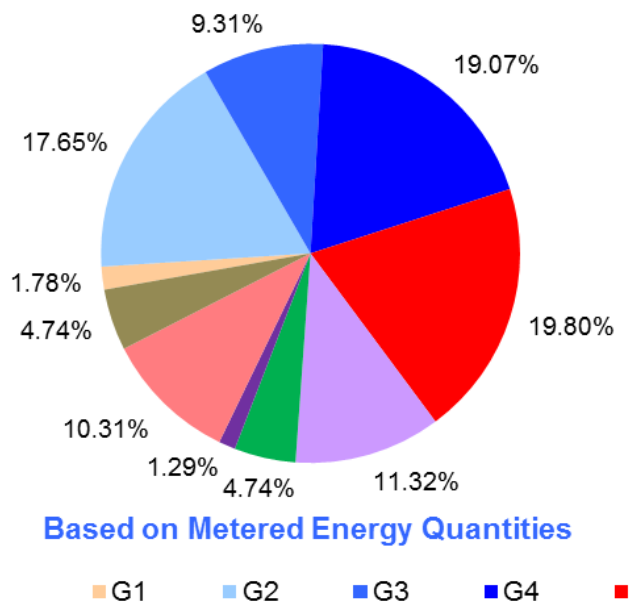
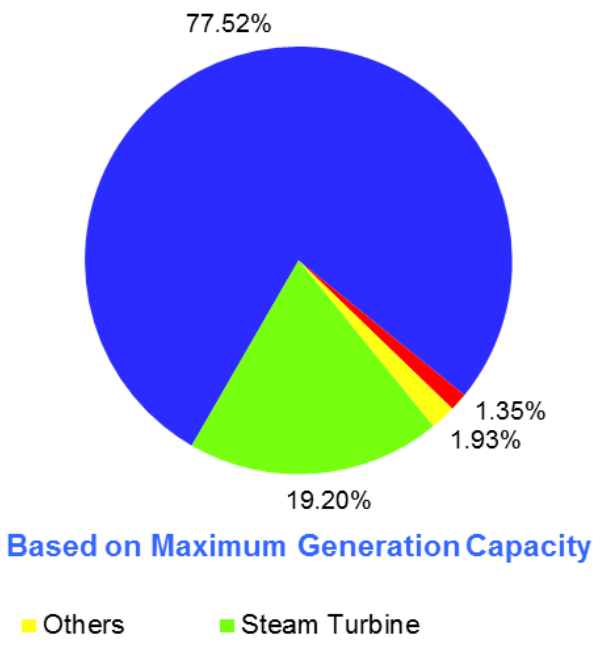
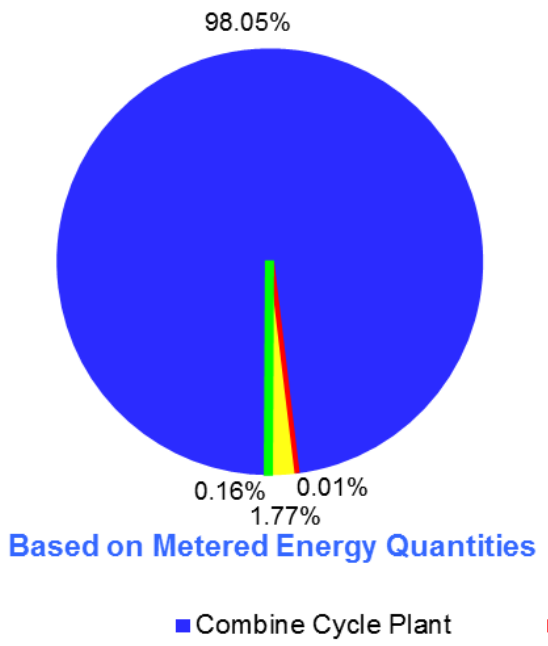


Chart 4: Comparison of Average Market Share by Generation Type Q3 2016



Demand Indicators

Chart 5: Monthly Load Forecast Variation

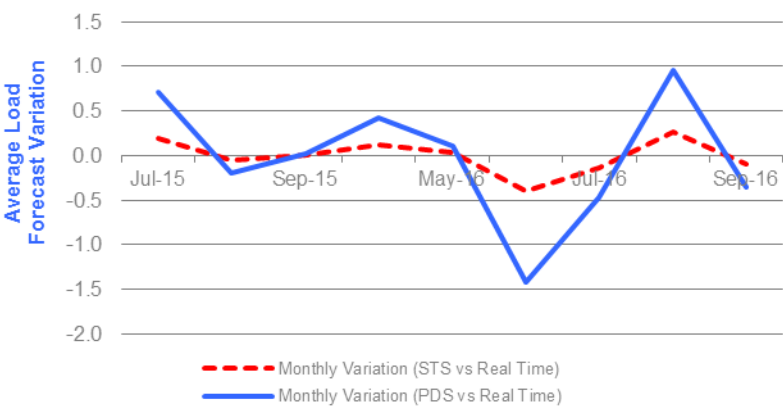
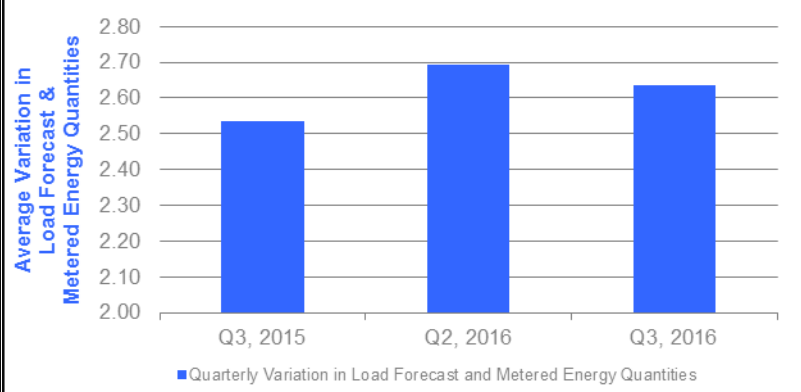


Chart 6: Variation in Real Time Load Forecast & Metered Energy Quantities



Energy Prices

Chart 7: WEP vs Vesting Contract Hedge Price (VCHP)

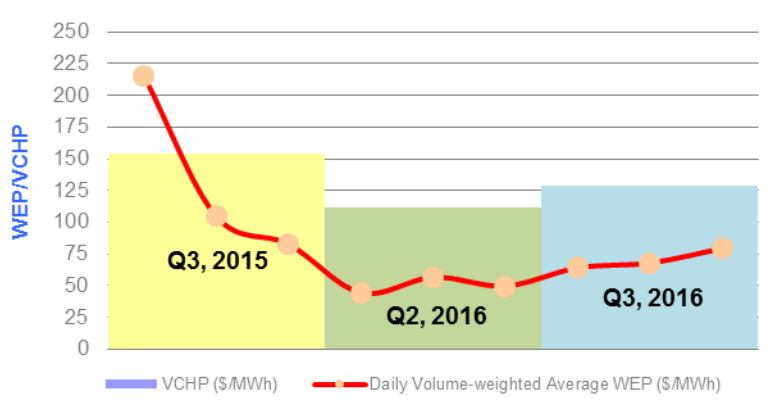


Chart 8: Comparison of Metered Energy Quantities

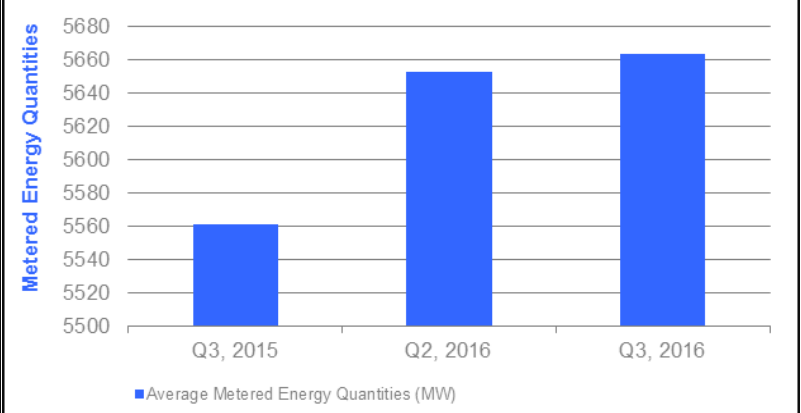


Chart 9: Percentage of Hours when WEP Falls into a Particular Price Range

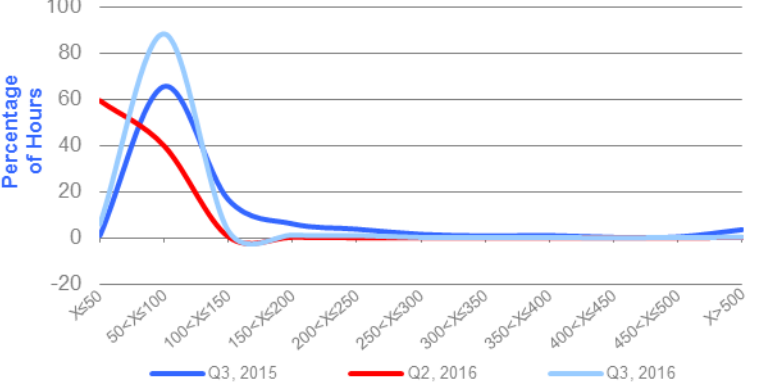


Chart 10: Percentage of Metered Energy Quantities when WEP Falls into a Particular Price Range

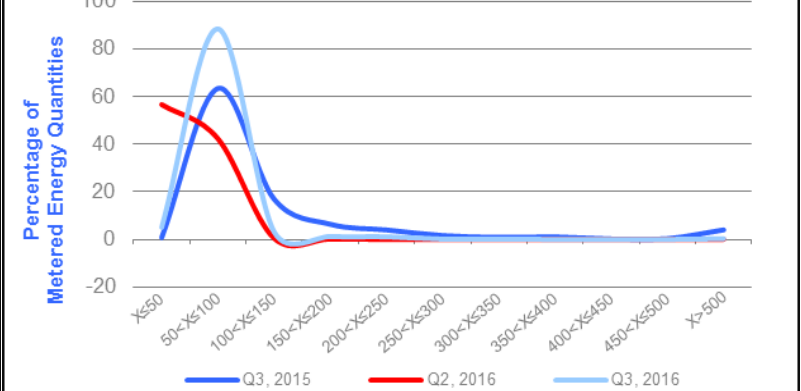


Chart 11: Correlation between WEP & Metered Energy Quantities

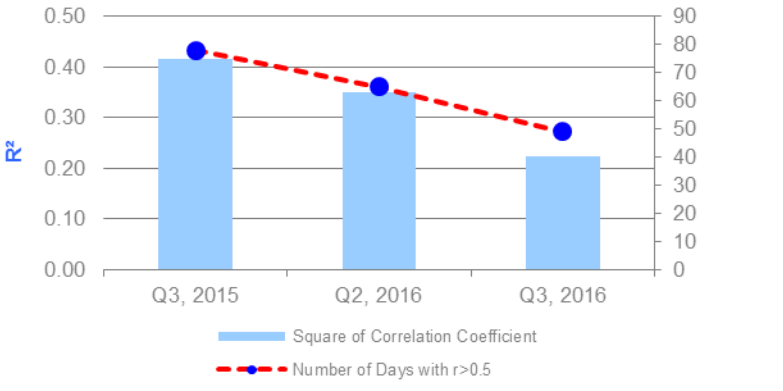
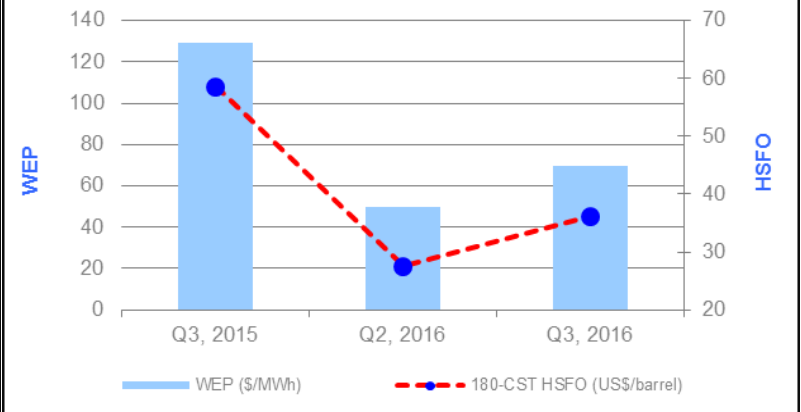


Chart 12: WEP vs Fuel Oil Price (HSFO)



Ancillary Services Prices

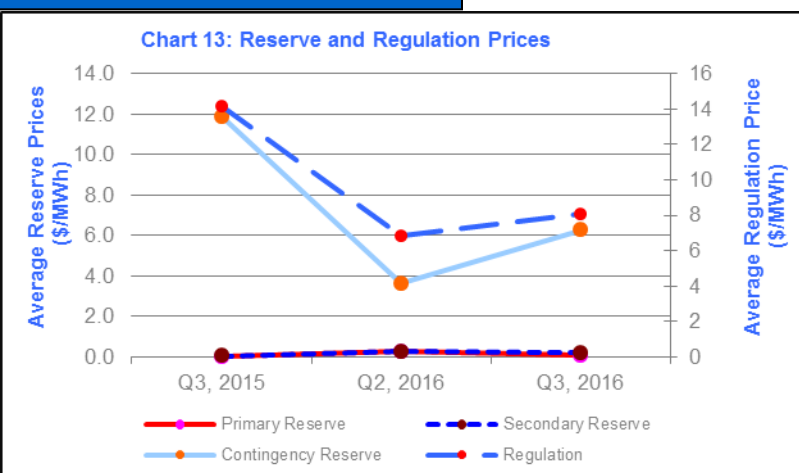


Table 2: Compliance Statistics for Q3 2016

No. of cases of potential rule breaches	134
Self-reports	1
Referrals/Complaints	133
MSCP initiatives	0
No. of determinations	150
Rule breach	0
No rule breach	149
No further action	1
Enforcement	
No. of cases with enforcement action	0
-Financial penalty	0
-Letter of non-compliance	0
Total amount of financial penalties	\$0
Total amount of costs	\$0

A User Guide on terms used in this publication is available for download from the Energy Market Company website at www.emcsq.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.