

MSCP Market Watch

Second Quarter (Apr-Jun) 2016

Issue 40

Table 1: Indicators of Market Performance

	2015	2016	
	Q2	Q1	Q2
Price Indicators			
<i>Energy (\$/MWh)</i>			
- USEP	103.04	56.26	49.42
- WEP	103.03	56.76	49.90
- Allocated Vesting Price	139.62	127.92	111.86
- LNG Vesting Price	143.91	134.22	118.53
- Balance Vesting Price	132.55	119.48	100.01
<i>Ancillary Services (\$/MWh)</i>			
- Primary Reserve	0.07	0.09	0.26
- Secondary Reserve	0.27	0.26	0.26
- Contingency Reserve	13.01	5.86	3.64
- Regulation	17.64	9.23	6.83
HSFO Spot (US\$/barrel)	58.59	27.53	36.14
Demand Indicators			
<i>Forecast Demand (MW)</i>			
- Average	5,628	5,491	5,773
- Peak	6,696	6,642	6,846
<i>Metered Energy (MW)</i>			
- Average	5,515	5,371	5,652
- Peak	6,639	6,581	6,766
Supply Indicators			
Average Supply (MW)	7,805	7,900	8,328
Supply Cushion (%)	27.89	30.48	30.67
<i>Capacity Ratio (%)</i>			
- CCGT	65.30	59.61	61.58
- OCGT	0.53	0.03	0.11
- OT	52.76	52.14	48.86
- ST	0.13	0.17	0.16
<i>Total Outages (MWh Cumulative)</i>			
- Planned	2,138,070	2,299,182	2,012,188
- Forced	17,971	147,651	17,299
<i>Offers made at or below \$100/MWh (%)</i>			
	74.33	75.33	75.87

Market Performance

The Uniform Singapore Energy Price (USEP) decreased 12.16 percent, from \$56.26/MWh in Q1 2016 to \$49.42/MWh in Q2 2016. By the same token, the Wholesale Electricity Price (WEP) decreased 12.09 percent, from \$56.76/MWh in Q1 2016 to \$49.90/MWh in Q2 2016.

All vesting prices continued to decrease in Q2 2016. The Balance Vesting Price showed the largest change; it fell 16.30 percent to \$100.01/MWh in Q2 2016.

The prices of all ancillary services, except for that of primary reserve, declined this quarter. Primary reserve price increased 188.98 percent to \$0.26/MWh. The largest price decrease was observed in contingency reserve; by 37.98 percent to \$3.64/MWh.

The High Sulphur Fuel Oil (HSFO) spot price increased 31.27 percent from US\$27.53/barrel in Q1 2016 to US\$36.14/barrel in Q2 2016.

Demand grew 5.24 percent to 5,652 MW and supply increased 5.41 percent to 8,328 MW. The supply cushion, which measures supply adequacy, strengthened 0.19 percentage point from 30.48 percent in Q1 2016 to 30.67 percent in Q2 2016.

The capacity ratios of the various generation types were mixed. The capacity ratios of CCGT and OCGT rose 1.97 and 0.08 percentage points respectively while those of OT and ST fell 3.28 and 0.01 percentage points respectively.

Planned outage volume decreased 12.48 percent to 2,012,188 MWh in Q2 2016. Forced outage volume decreased as well, to 17,299 MWh this quarter.

Overall, the percentage of offers made at or below \$100/MWh rose 0.54 percentage point to 75.87 percent in Q2 2016.

The Market Surveillance and Compliance Panel (MSCP) issued two rule breach determinations in Q2 2016 against:

- i. Energy Market Company Pte Ltd for its failure to release real-time dispatch schedule and short-term schedule to the Power System Operator on 25 January 2016; and
- ii. ExxonMobil Asia Pacific Pte Ltd for its failure to comply with the declared quantity rules from November 2015 to February 2016.

Supply Indicators

Chart 1: Capacity Ratio of Generation Plants

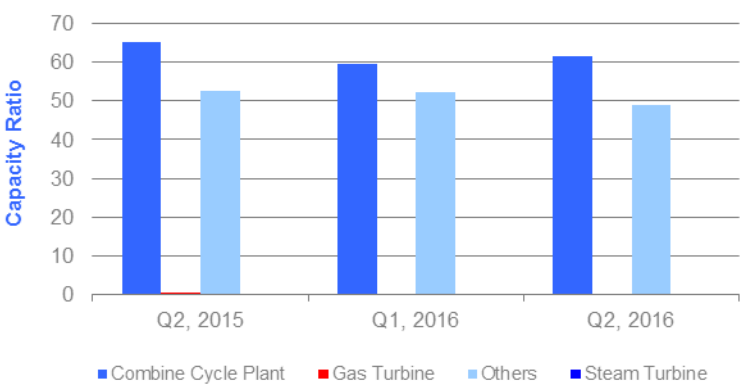


Chart 2: Relationship between USEP and Energy Supply Cushion - Q2 2016

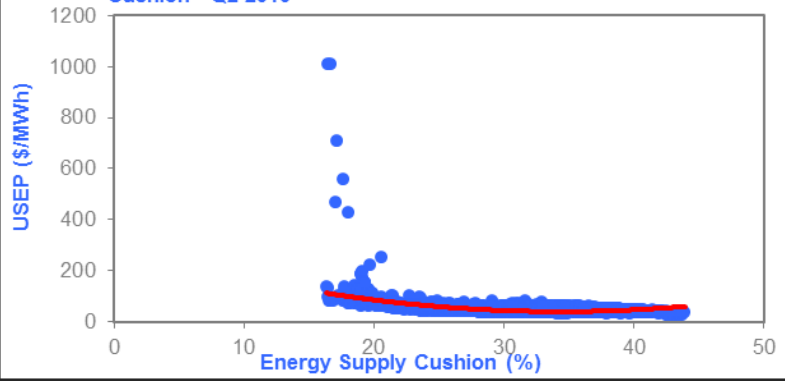


Chart 3: Comparison of Average Market Share by Generation Company Q2 2016

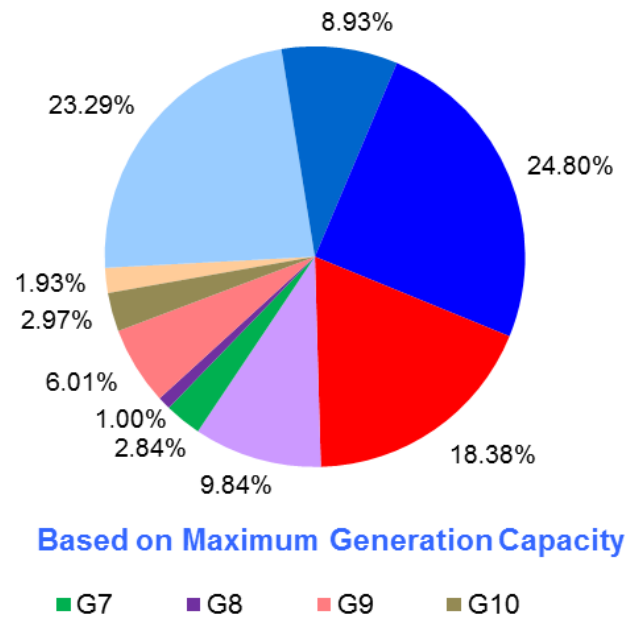
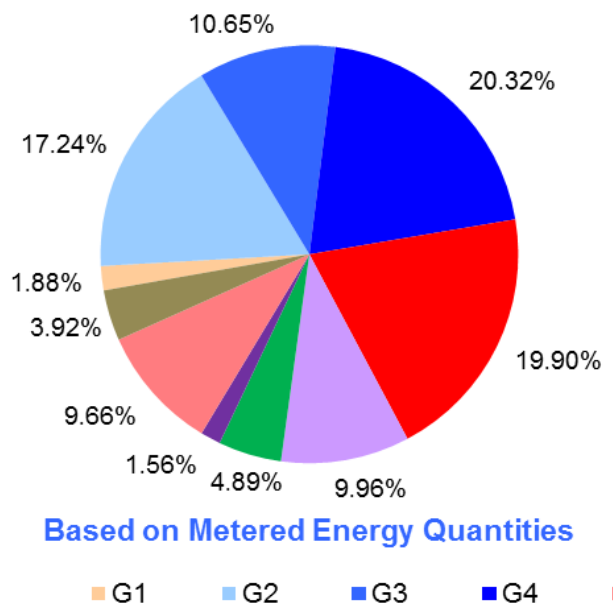
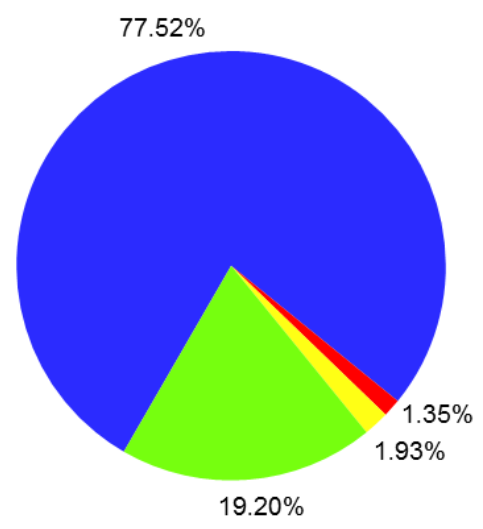
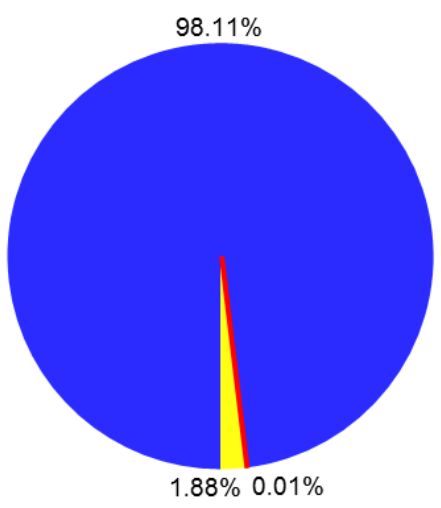


Chart 4: Comparison of Average Market Share by Generation Type Q2 2016



■ Combine Cycle Plant ■ Gas Turbine ■ Others ■ Steam Turbine

Demand Indicators

Chart 5: Monthly Load Forecast Variation

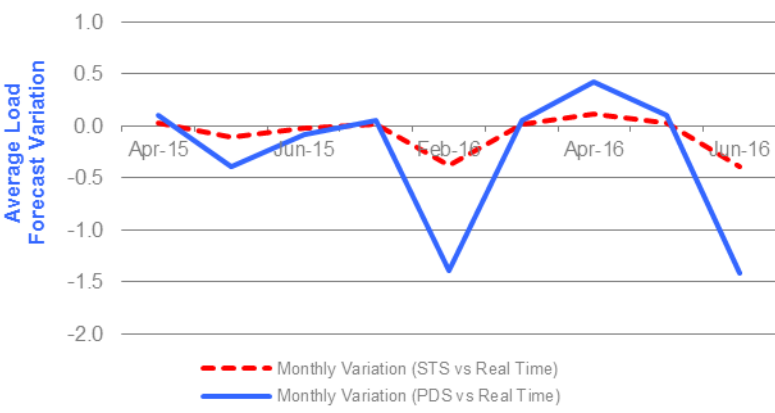
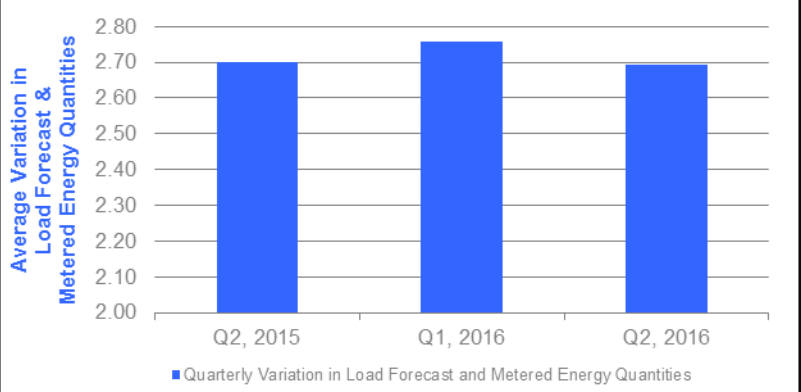


Chart 6: Variation in Real Time Load Forecast & Metered Energy Quantities



Energy Prices

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

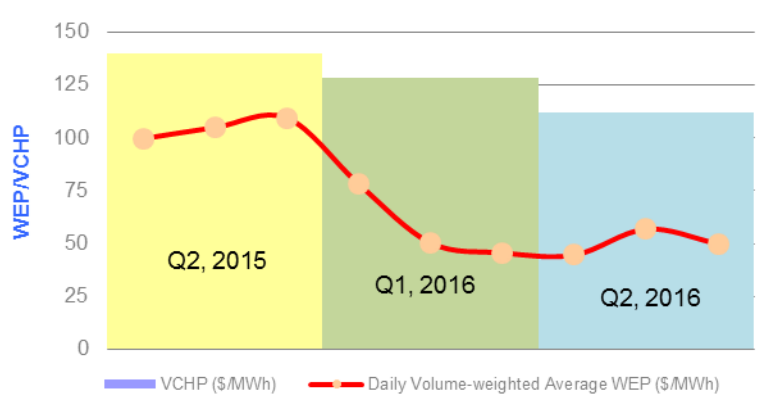


Chart 8: Comparison of Metered Energy Quantities

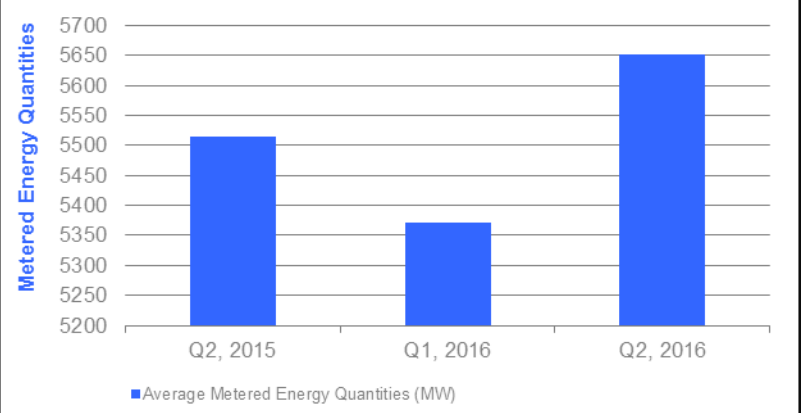


Chart 9: Percentage of Hours when WEP Falls into a Particular Price Range

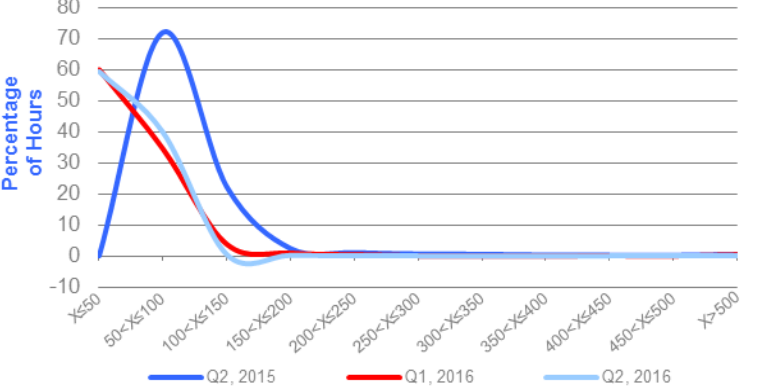


Chart 10: Percentage of Metered Energy Quantities when WEP Falls into a Particular Price Range

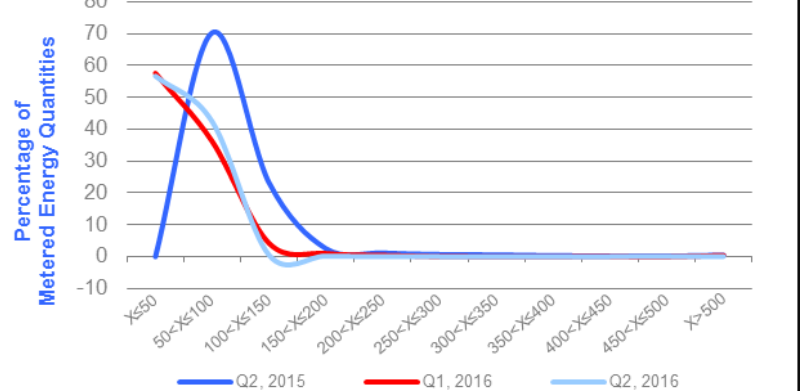


Chart 11: Correlation between WEP & Metered Energy Quantities

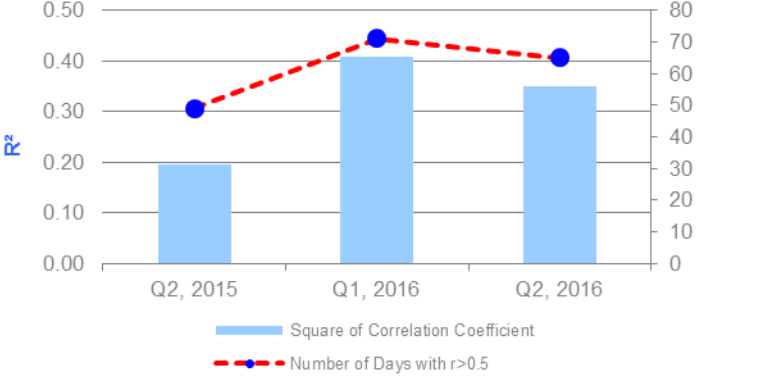
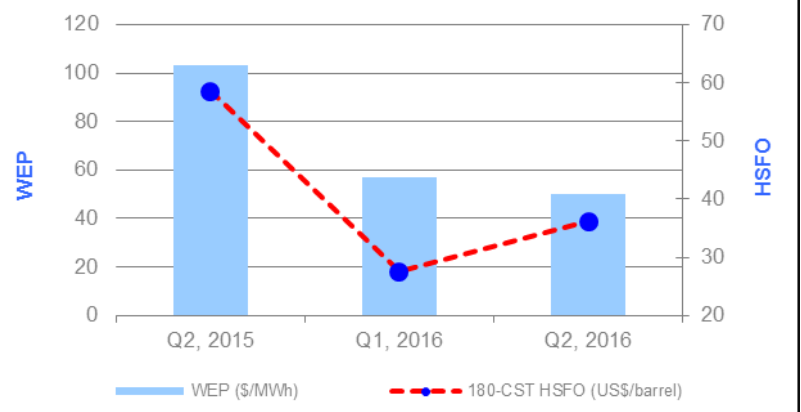
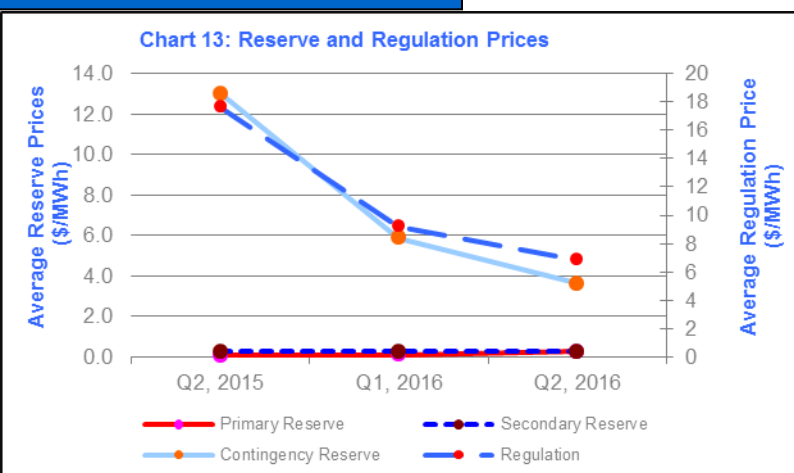


Chart 12: WEP vs Fuel Oil Price (HSFO)





No. of cases of potential rule breaches	143
Self-reports	1
Referrals/Complaints	142
MSCP initiatives	0
No. of determinations	122
Rule breach	2
No rule breach	120
No further action	0
Enforcement	2
No. of cases with enforcement action	
-Financial penalty	0
-Letter of non-compliance	2
Total amount of financial penalties	\$0
Total amount of costs	\$9,100

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.