

# MSCP Market Watch

First Quarter (Jan-Mar) 2016

Issue 39

Table 1: Indicators of Market Performance

	2015		2016
	Q1	Q4	Q1
<b>Price Indicators</b>			
<i>Energy (\$/MWh)</i>			
- USEP	88.55	61.45	56.26
- WEP	88.79	61.62	56.76
- Allocated Vesting Price	166.76	133.95	127.92
- LNG Vesting Price	170.77	138.73	134.22
- Balance Vesting Price	160.20	127.51	119.48
<i>Ancillary Services (\$/MWh)</i>			
- Primary Reserve	3.18	0.07	0.09
- Secondary Reserve	1.08	0.23	0.26
- Contingency Reserve	5.60	6.37	5.86
- Regulation	19.44	22.13	9.23
<i>HSFO Spot (US\$/barrel)</i>	52.69	35.81	27.53
<b>Demand Indicators</b>			
<i>Forecast Demand (MW)</i>			
- Average	5,381	5,524	5,491
- Peak	6,513	6,656	6,642
<i>Metered Energy (MW)</i>			
- Average	5,242	5,419	5,371
- Peak	6,432	6,578	6,581
<b>Supply Indicators</b>			
<i>Average Supply (MW)</i>	7,726	7,899	7,900
<i>Supply Cushion (%)</i>	30.34	30.03	30.48
<i>Capacity Ratio (%)</i>			
- CCGT	59.02	61.03	59.61
- OCGT	0.16	0.00	0.03
- OT	50.50	52.34	52.14
- ST	0.13	0.14	0.17
<i>Total Outages (MWh Cumulative)</i>			
- Planned	1,882,458	1,888,037	2,299,182
- Forced	20,895	157,675	147,651
<i>Offers made at or below \$100/MWh (%)</i>			
	72.33	76.17	75.33

## Market Performance

The Uniform Singapore Energy Price (USEP) decreased 8.45 percent, from \$61.45/MWh in Q4 2015 to \$56.26/MWh in Q1 2016. By the same token, the Wholesale Electricity Price (WEP) decreased 7.88 percent, from \$61.62/MWh in Q4 2015 to \$56.76/MWh in Q1 2016.

All vesting prices continued to decrease in Q1 2016. The Balance Vesting Price showed the largest change; it fell 6.30 percent to \$119.48/MWh in Q1 2016.

The price movements of ancillary services were mixed this quarter. Primary reserve had the largest price increase – 33.85 percent to \$0.09/MWh. The largest price decrease was observed in regulation; by 58.31 percent to \$9.23/MWh.

The High Sulphur Fuel Oil (HSFO) spot price decreased 23.12 percent from US\$35.81/barrel in Q4 2015 to US\$27.53/barrel in Q1 2016.

Demand contracted 0.89 percent to 5,371MW while supply increased slightly by 0.01 percent. The supply cushion, which measures supply adequacy, increased 0.45 percentage point from 30.03 percent in Q4 2015 to 30.48 percent in Q1 2016.

The capacity ratios of CCGT, OCGT, OT and ST were mixed. CCGT and OT decreased 1.43 and 0.20 percentage point respectively while OCGT and ST increased by the same margin of 0.03 percentage point.

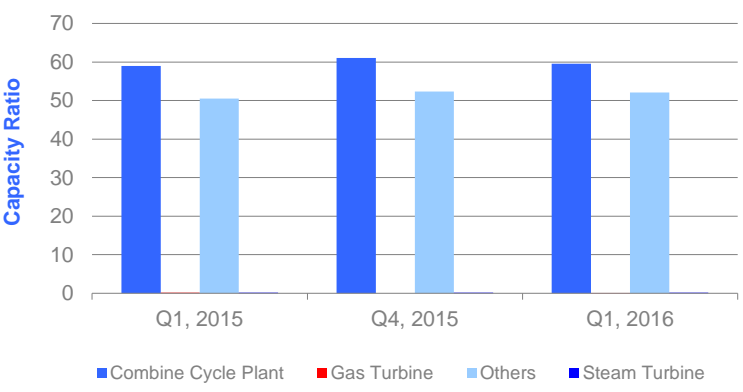
Planned outage volume rose 21.78 percent to 2,299,182MWh in Q1 2016. Forced outage volume decreased to 147,651MWh this quarter.

Overall, the percentage of offers made at or below \$100/MWh decreased 0.84 percentage point to 75.33 percent in Q1 2016.

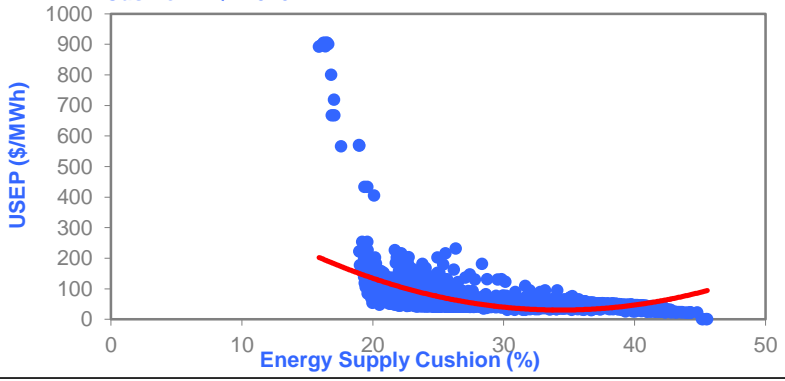
The MSCP issued one rule breach determination in Q1 2016 against the Energy Market Company Pte Ltd for its late validation of offer on 20 August 2015.

# Supply Indicators

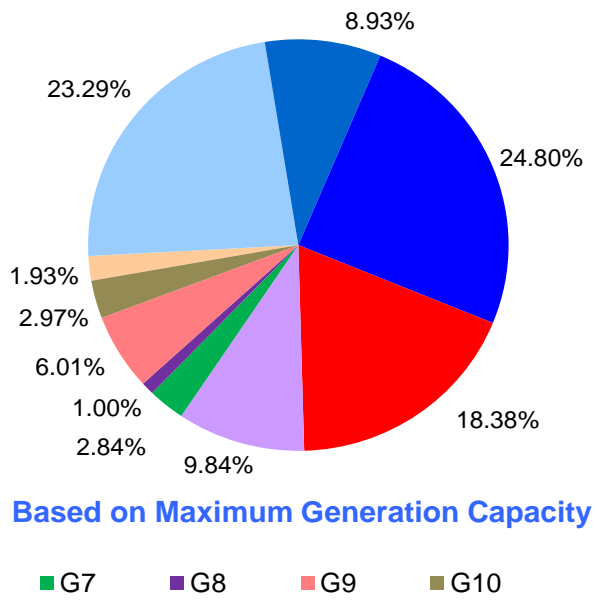
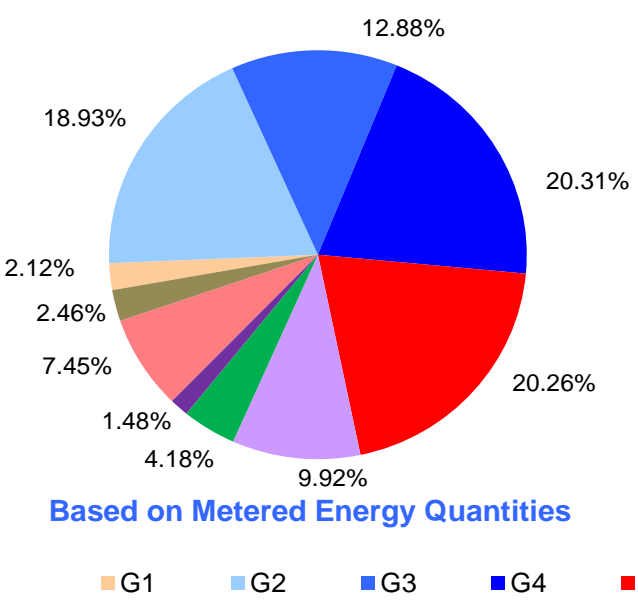
**Chart 1: Capacity Ratio of Generation Plants**



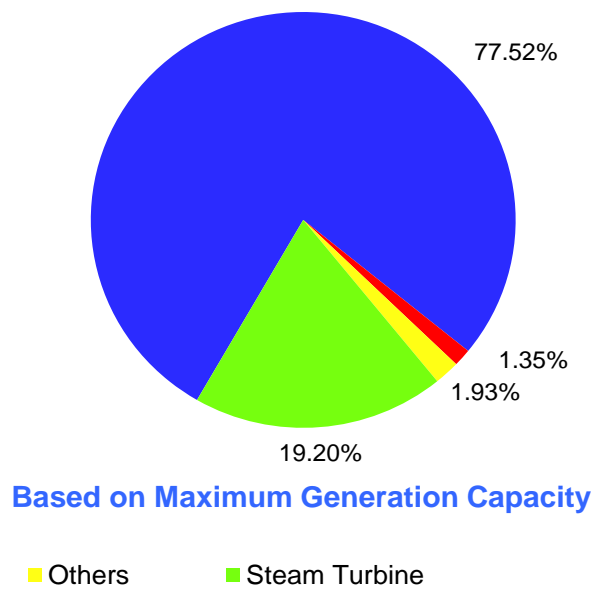
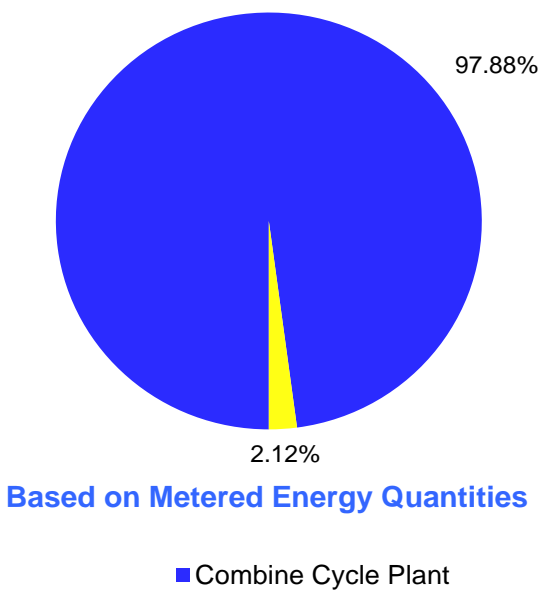
**Chart 2: Relationship between USEP and Energy Supply Cushion - Q1 2016**



**Chart 3: Comparison of Average Market Share by Generation Company Q1 2016**

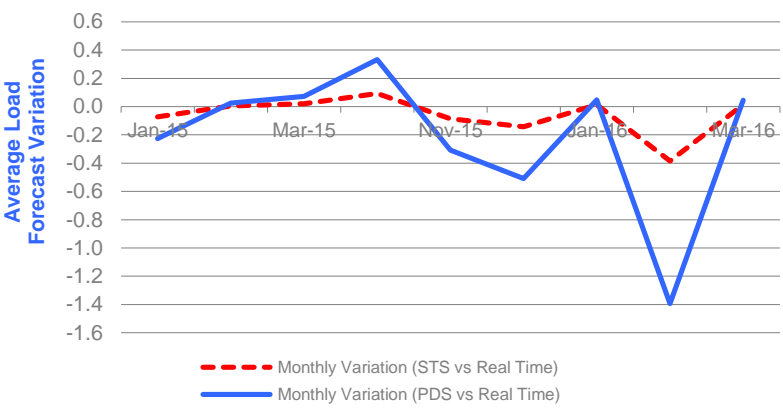


**Chart 4: Comparison of Average Market Share by Generation Type Q1 2016**

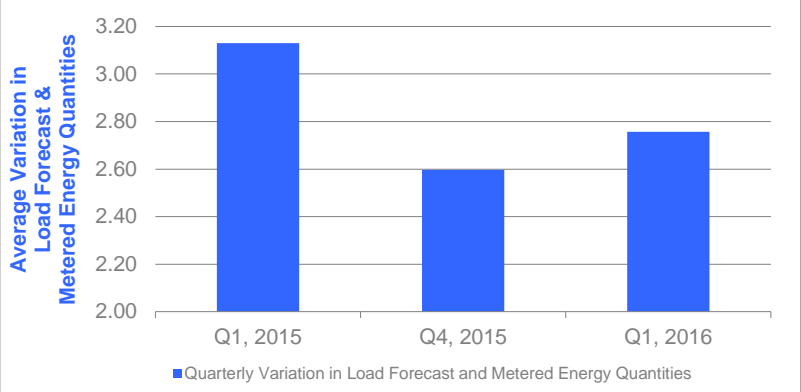


# Demand Indicators

### Chart 5: Monthly Load Forecast Variation

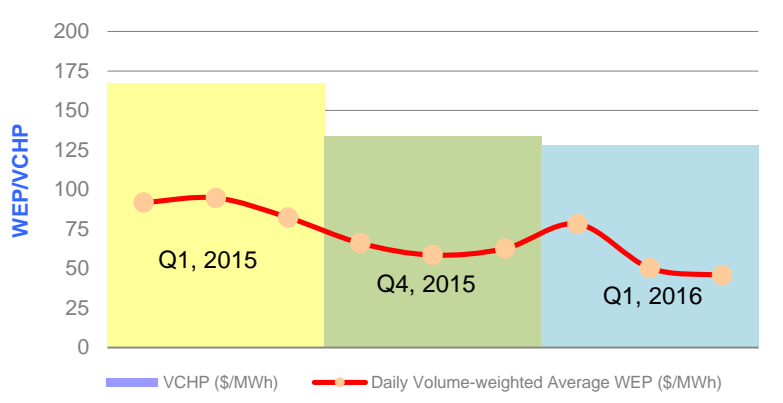


### Chart 6: Variation in Real Time Load Forecast & Metered Energy Quantities

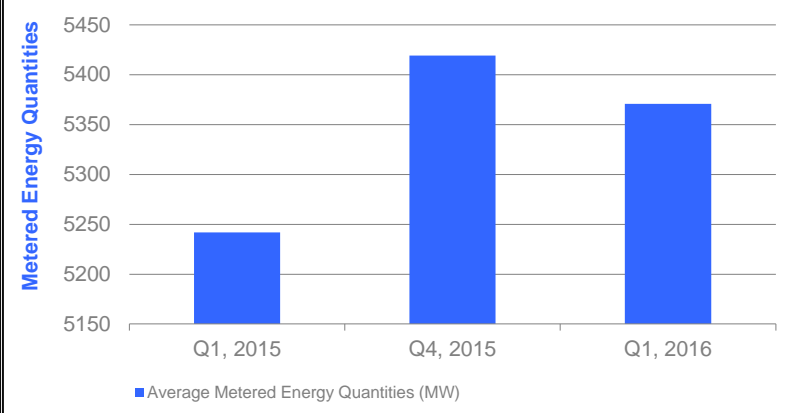


# Energy Prices

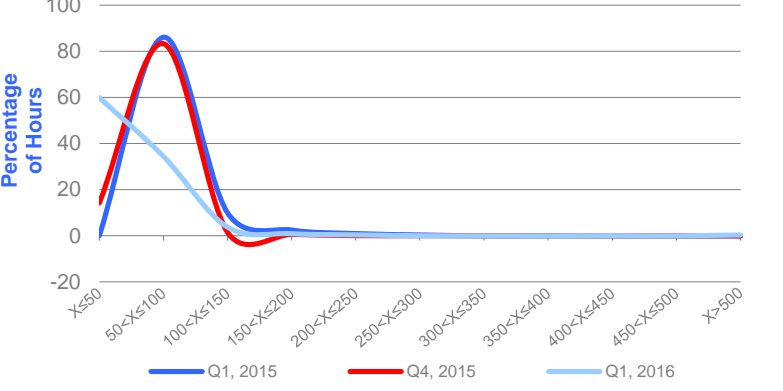
### Chart 7: WEP vs Vesting Contract Hedge Price (VCHP)



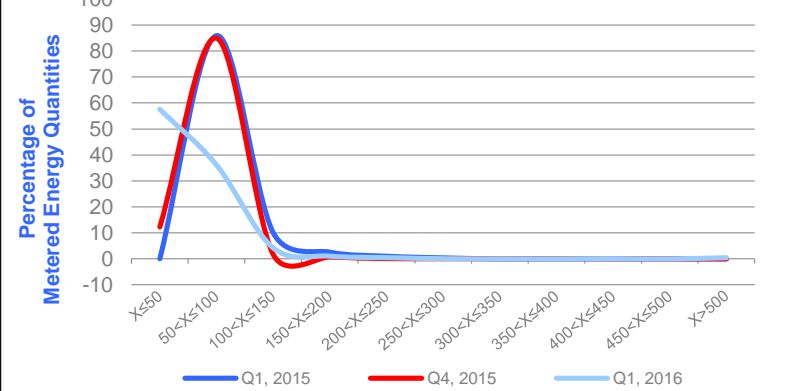
### Chart 8: Comparison of Metered Energy Quantities



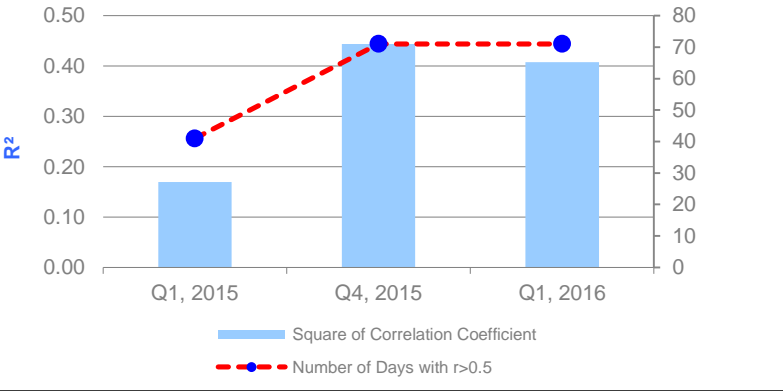
### Chart 9: Percentage of Hours when WEP Falls into a Particular Price Range



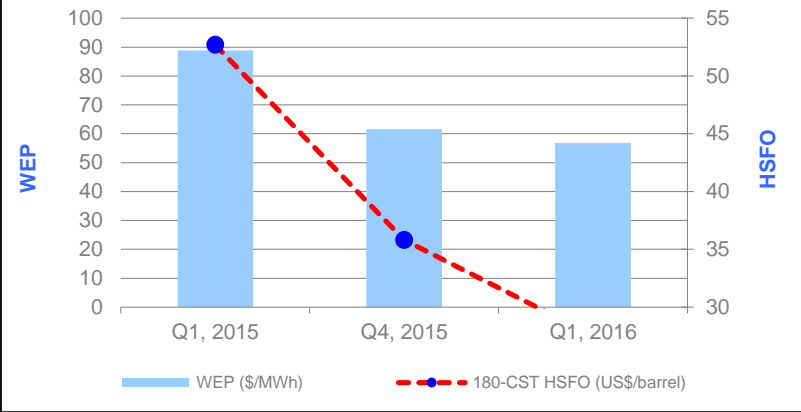
### Chart 10: Percentage of Metered Energy Quantities when WEP Falls into a Particular Price Range



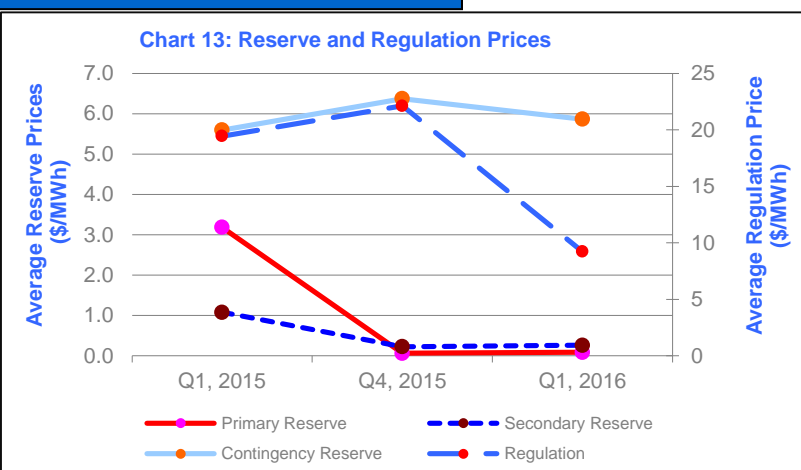
### Chart 11: Correlation between WEP & Metered Energy Quantities



### Chart 12: WEP vs Fuel Oil Price (HSFO)



# Ancillary Services Prices



<b>No. of cases of potential rule breaches</b>	<b>140</b>
<i>Self-reports</i>	3
<i>Referrals/Complaints</i>	137
<i>MSCP initiatives</i>	0
<b>No. of determinations</b>	<b>164</b>
<i>Rule breach</i>	1
<i>No rule breach</i>	162
<i>No further action</i>	1
<b>Enforcement</b>	<b>1</b>
No. of cases with enforcement action	1
- <i>Financial penalty</i>	0
- <i>Letter of non-compliance</i>	1
Total amount of financial penalties	\$0
Total amount of costs	\$1,500

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

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

- **TPB 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.**