

# MSCP Market Watch

Fourth Quarter (Oct-Dec) 2013

Issue 30

Table 1: Indicators of Market Performance

	2012	2013	
	Q4	Q3	Q4
<b>Price Indicators</b>			
<i>Energy (\$/MWh)</i>			
- USEP	202.24	178.55	155.38
- WEP	203.23	179.62	154.81
- VCHP	205.48	190.71	197.01
<i>Ancillary Services (\$/MWh)</i>			
- Primary Reserve	0.47	0.58	0.80
- Secondary Reserve	1.95	0.94	1.29
- Contingency Reserve	26.73	8.60	8.07
- Regulation	96.24	87.92	95.74
<i>HSFO Spot (US\$/barrel)</i>	99.02	96.15	97.46
<b>Demand Indicators</b>			
<i>Forecast Demand (MW)</i>			
- Average	5,138	5,392	5,323
- Peak	6,328	6,547	6,537
<i>Metered Energy (MW)</i>			
- Average	5,019	5,265	5,181
- Peak	6,299	6,429	6,463
<b>Supply Indicators</b>			
<i>Average Supply (MW)</i>	6,919	7,244	7,223
<i>Supply Cushion (%)</i>	25.75	25.55	26.28
<i>Capacity Ratio (%)</i>			
- CCGT	71.48	69.90	66.94
- OCGT	0.23	1.14	0.30
- OT	47.16	53.64	51.29
- ST	16.57	7.33	4.66
<i>Total Outages (MWh Cumulative)</i>			
- Planned	2,034,860	1,654,022	1,888,177
- Forced	40,310	99,648	117,870
<i>Offers made at or below \$100/MWh (%)</i>	55.83	57.06	57.51

## Market Performance

The Uniform Singapore Energy Price (USEP) decreased 12.98 percent from \$178.55/MWh in Q3 2013 to \$155.38/MWh in Q4 2013. In line with the decrease in the USEP, the Wholesale Electricity Price (WEP) decreased 13.81 percent to \$154.81/MWh in Q4 2013. Meanwhile, the Vesting Contract Hedge Price (VCHP) increased 3.30 percent from \$190.71/MWh in Q3 2013 to \$197.01/MWh in Q4 2013.

Price movements of ancillary services increased across the board except for contingency reserve price, which decreased 6.16 percent to \$8.07/MWh in Q4 2013. Regulation price increased 8.89 percent to \$95.74/MWh.

The High Sulphur Fuel Oil (HSFO) spot price increased 1.36 percent from US\$96.15/barrel in Q3 2013 to US\$97.46/barrel in Q4 2013.

The supply cushion, which measures supply adequacy, increased 0.73 percentage point from 25.55 percent in Q3 2013 to 26.28 percent in Q4 2013. Demand decreased 1.60 percent to 5,181MW and supply decreased 0.29 percent to 7,223MW in Q4 2013. This quarter saw lower offering levels from all unit types – the capacity ratios of CCGT and ST units declined by 2.96 and 2.67 percentage points respectively.

Planned outage volume increased 14.16 percent from 1,654,022MWh in Q3 2013 to 1,888,177MWh in Q4 2013. Forced outage volume increased 18.29 percent to 117,870MWh.

In Q4 2013, the MSCP made two rule breach determinations on:

- i) Keppel Merlimau Cogen failed to promptly inform the Power System Operator of plant tripping on 1 May 2013.
- ii) Energy Market Company failed to release real-time dispatch schedules to the Power System Operator on 1 August 2013.

# Supply Indicators

Chart 1: Capacity Ratio of Generation Plants

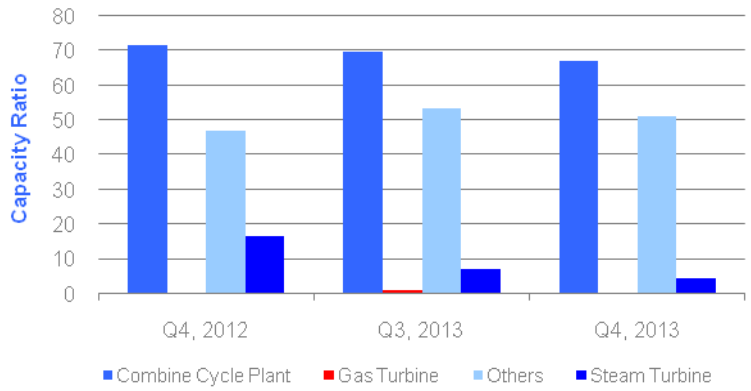


Chart 2: Relationship between USEP and Energy Supply Cushion - Q4 2013

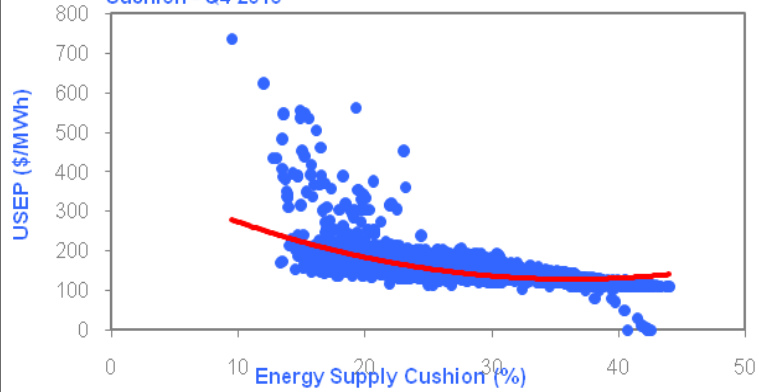


Chart 3: Comparison of Average Market Share by Generation Company Q4 2013

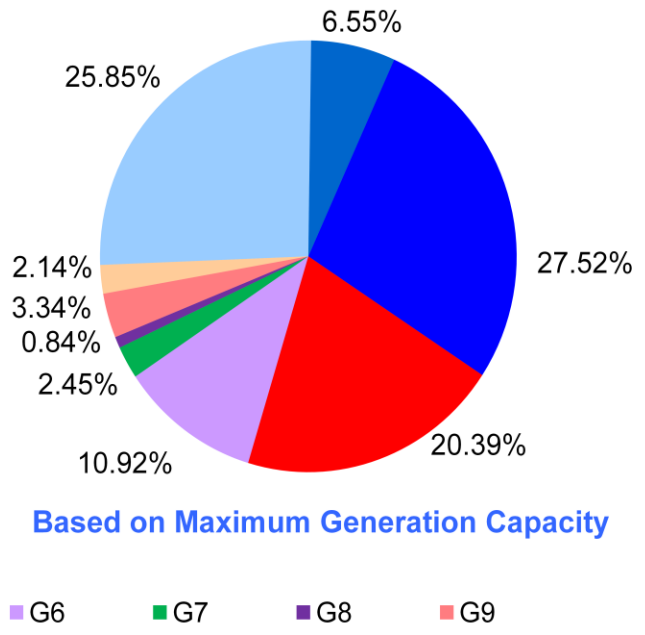
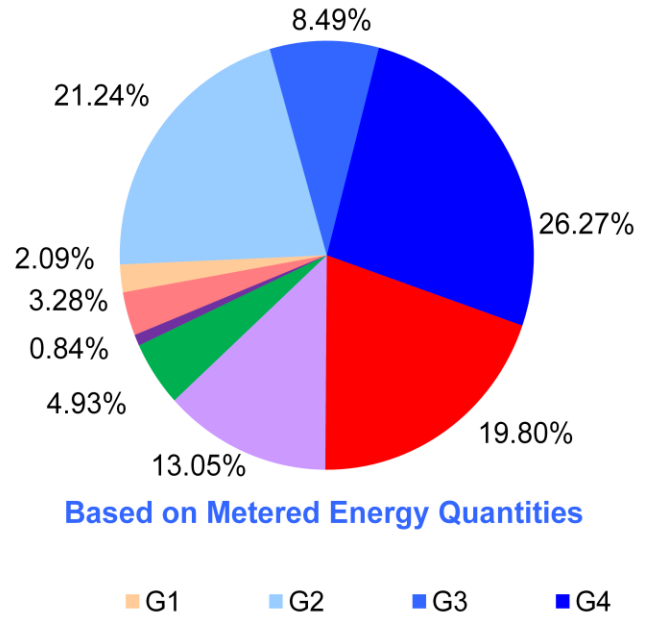
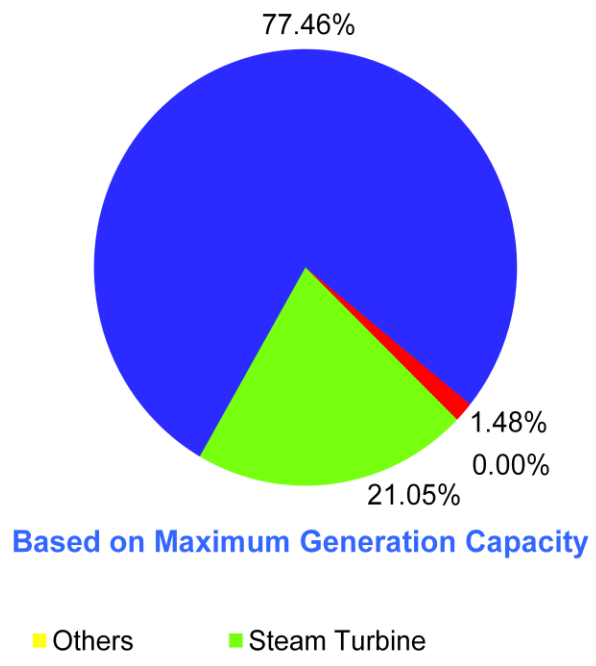
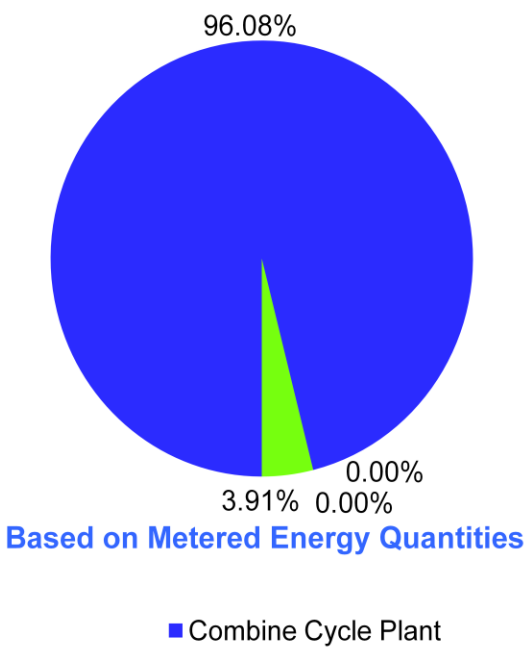


Chart 4: Comparison of Average Market Share by Generation Type Q4 2013



# Demand Indicators

Chart 5: Monthly Load Forecast Variation

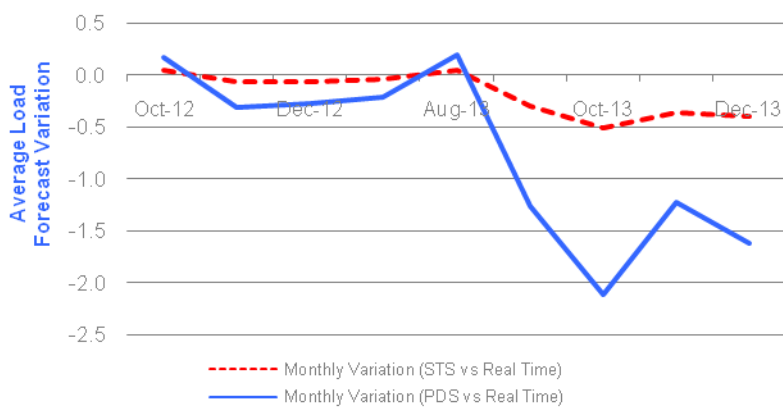
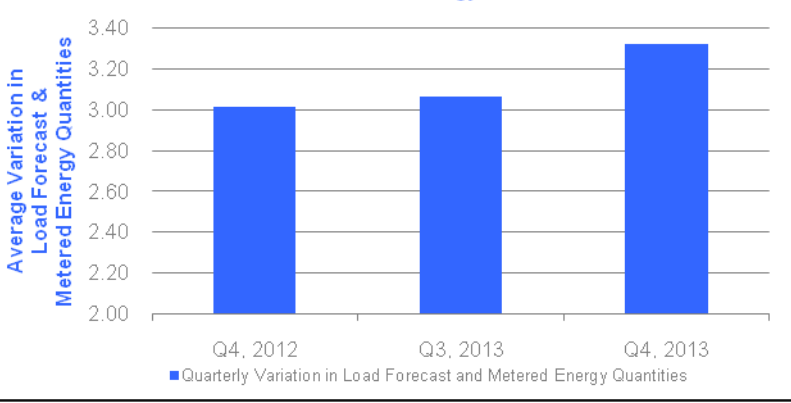


Chart 6: Variation in Real Time Load Forecast & Metered Energy Quantities



# Energy Prices

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

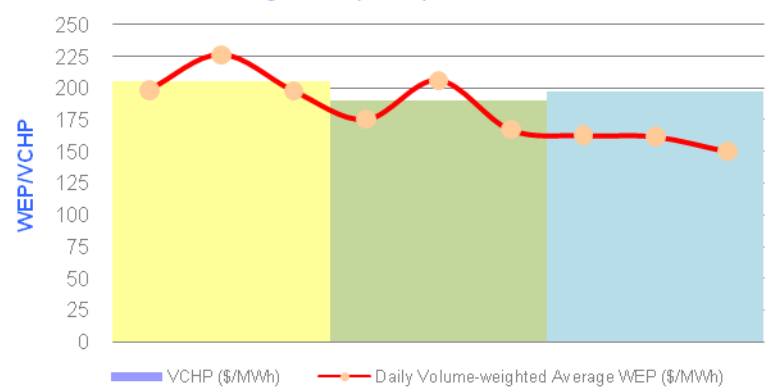


Chart 8: Comparison of Metered Energy Quantities

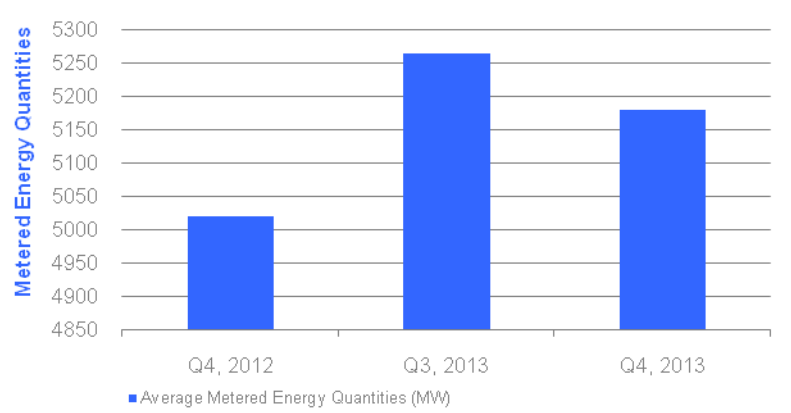


Chart 9: Percentage of Hours when WEP Falls into a Particular Price Range

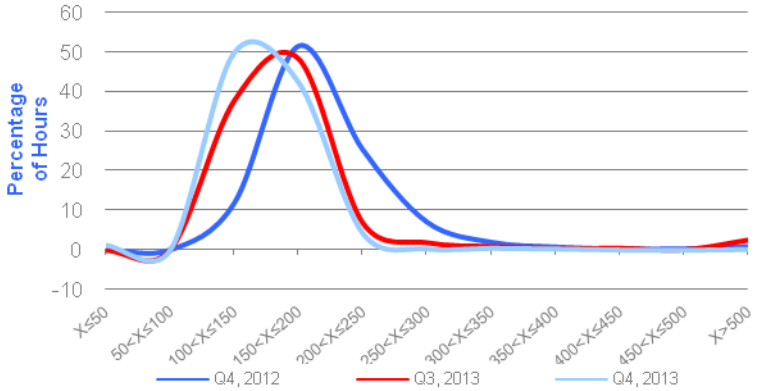


Chart 10: Percentage of Metered Energy Quantities when WEP Falls into a Particular Price Range

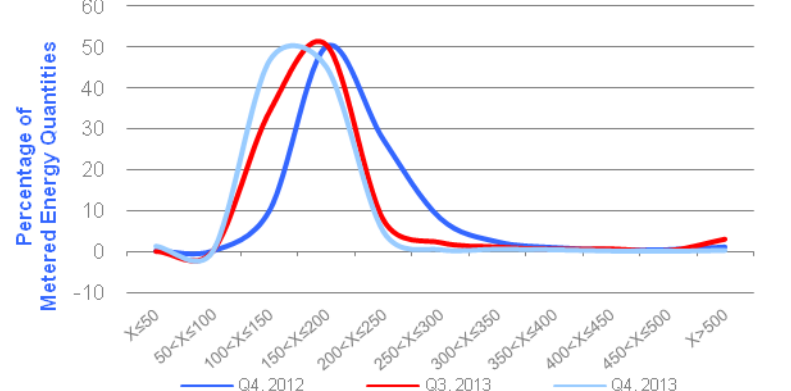


Chart 11: Correlation between WEP & Metered Energy Quantities

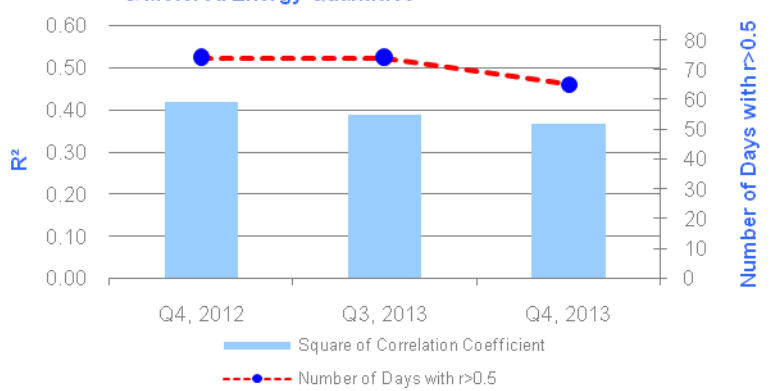
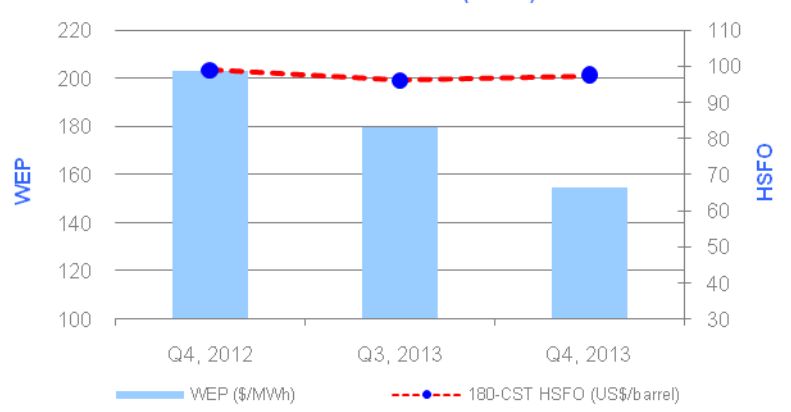


Chart 12: WEP vs Fuel Oil Prices (HSFO)



# Ancillary Services Prices

Chart 13: Reserve and Regulation Prices

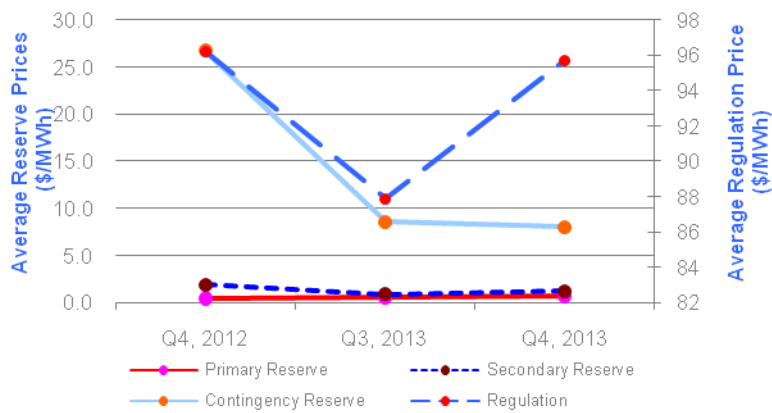


Table 2: Compliance Statistics for Q4 2013

<b>No. of cases of potential rule breaches</b>	<b>414</b>
Self-reports	2
Referrals/Complaints	412
MSCP initiatives	0
<b>No. of determinations</b>	<b>331</b>
Rule breach	2
No rule breach	328
No further action	1
<b>Enforcement</b>	<b>2</b>
No. of cases with enforcement action	
-Financial penalty	1
-Letter of non-compliance	1
Total amount of financial penalties	\$20,000
Total amount of costs	\$7,625

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

- Thean Lip Ping, Chair
- Lee Keh Sai
- Professor Lim Chin
- TPB Menon
- Philip Chua

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