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China Hongqiao – "Creator" of World's Most Efficient Generators

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China Hongqiao finally published a "clarification" announcement October 25. Such "clarifications" has fortified our confidence in our February 28 report regarding China Hongqiao's financial frauds, and we look forward to Securities and Futures Commission of Hong Kong taking further regulatory proceedings.

We note in our Feb 28 report that during 2007-15, total subsidies and under-reporting amounted to Rmb21.6bn, of which more than half came from the under-reporting of self-supplied electricity. Let's focus now on China Hongqiao's electricity production cost and the contradictions within the "clarification" announcement. We'll show our readers how China Hongqiao has "created" the world's most advanced power generators.

➢ Production cost of electricity (including cost of steam) still significantly below peers' average

To justify its claimed electricity production costs, which turned out to be one-third below that of leading Chinese independent power producers (IPPs), the "clarification" announcement repeatedly emphasizes that the thermal power plants are also able to generate a large volume of steam. From 2010 onward, it claims that the cost of steam, whether sold to external customers or used internally, has been recorded in various entries in the cost of sales rather than being included in the production cost of electricity. This is a suspicious accounting treatment.

Exhibit 1 below is reproduced from the table in p.26 of the "clarification" announcement, which purports to compare its electricity production cost with that of leading Chinese IPPs presented in our Feb 28 report. We grant China Hongqiao the most advantageous assumption and include the cost of steam in its electricity production cost. We can see that China Hongqiao's claimed electricity production costs (including cost of steam) in 2012-15 were still considerably lower than those of leading Chinese IPPs. So, please, don't pretend that steam production can help make production costs of electricity or power supply standard coal consumption much below those of industry peers.

Exhibit 1 – Comparison of cost of electricity production

	Cost of electricity production of the Group (excluding the cost of steam) *(RMB/kWh)*	Cost of electricity production of the Group (including the cost of steam) *(RMB/kWh)*	Average cost of electricity production of power generation companies elected by the 2017 Negative Report *(RMB/kWh)*	Difference
2010	0.201	0.258	–	
2011	0.227	0.283	–	
2012	0.214	0.256	0.325	-21%
2013	0.204	0.229	0.293	-22%
2014	0.176	0.190	0.276	-31%
2015	0.158	0.168	0.242	-31%

Sources: "Clarification" announcement, Emerson Analytics

Technically, the production of steam can help reduce the cost of electricity production somewhat, and when one deploys more of its coal in the production of electricity, the cost of steam becomes less significant. In 2015, China Hongqiao's cost of electricity production excluding the cost of steam was only 6% below the cost of electricity production including the cost of steam.

➢ **World's most advanced generators have been "created"**

The "clarification" announcement notes that the Weiqiao A&P's power supply standard coal consumption data presented in our Feb 28 report are actually data for "raw" coal used in its power generation.

What? Emerson Analytics cannot even distinguish power supply "raw" coal consumption from power supply standard coal consumption? If this were true, Emerson Analytics should really apologize to China Hongqiao, reimburse its losses, and be held legally accountable.

- To facilitate meaningful comparison, power supply "raw" coal consumption data are routinely converted into consumption data of 7,000 kcal standard coal. This is the benchmark most often used;

- Anyone with a basic understanding of power generation cannot possibly mix up these two benchmarks, certainly not Weiqiao A&P;

- The data that we have obtained are clearly marked as power supply standard coal consumption, as shown in Exhibit 2 below; and

"Creator" of World's Most Efficient Generators

- Seriously, if the data in Exhibit 2 are really power supply "raw" coal consumption, then the world's most advanced but yet still non-existent power generators will have been "created" by China Hongqiao.

Exhibit 2 – Weiqiao A&P's power supply standard coal consumption about 350g/kWh

图表 10. 公司近年来发电主要指标情况

	2012 年	2013 年	2014 年	2015 年第一季度
装机容量（万千瓦）	240	306	525	624
发电量（亿度）	146.16	180.11	226.87	88.59
电力自给率（%）	63.35	62.14	62.27	71.39
power supply standard coal consumption (g/kWh)			525	—
供电标准煤耗（克/千瓦时）	322	352	355	367
资料来源：魏桥铝电				

Source: Weiqiao A&P

	2013 年	2014 年	2015 年
装机容量（万千瓦）	306	525	801
发电量（亿度）	180.11	226.87	427.20
电力自给率（%）	62.14	62.27	79.33
power supply standard coal consumption (g/kWh)		12	6,537
供电标准煤耗（克/千瓦时）	352	355	351
资料来源：魏桥铝电			

Source: Weiqiao A&P

Sources: http://www.chinamoney.com.cn/fe/CMS5_G20306002Resource?info=16317254;res=14536855023901232028180;download=, p.16
http://www.chinamoney.com.cn/fe/CMS5_G20306002Resource?info=32551694;res=14731266802921861483238;download=, p.17

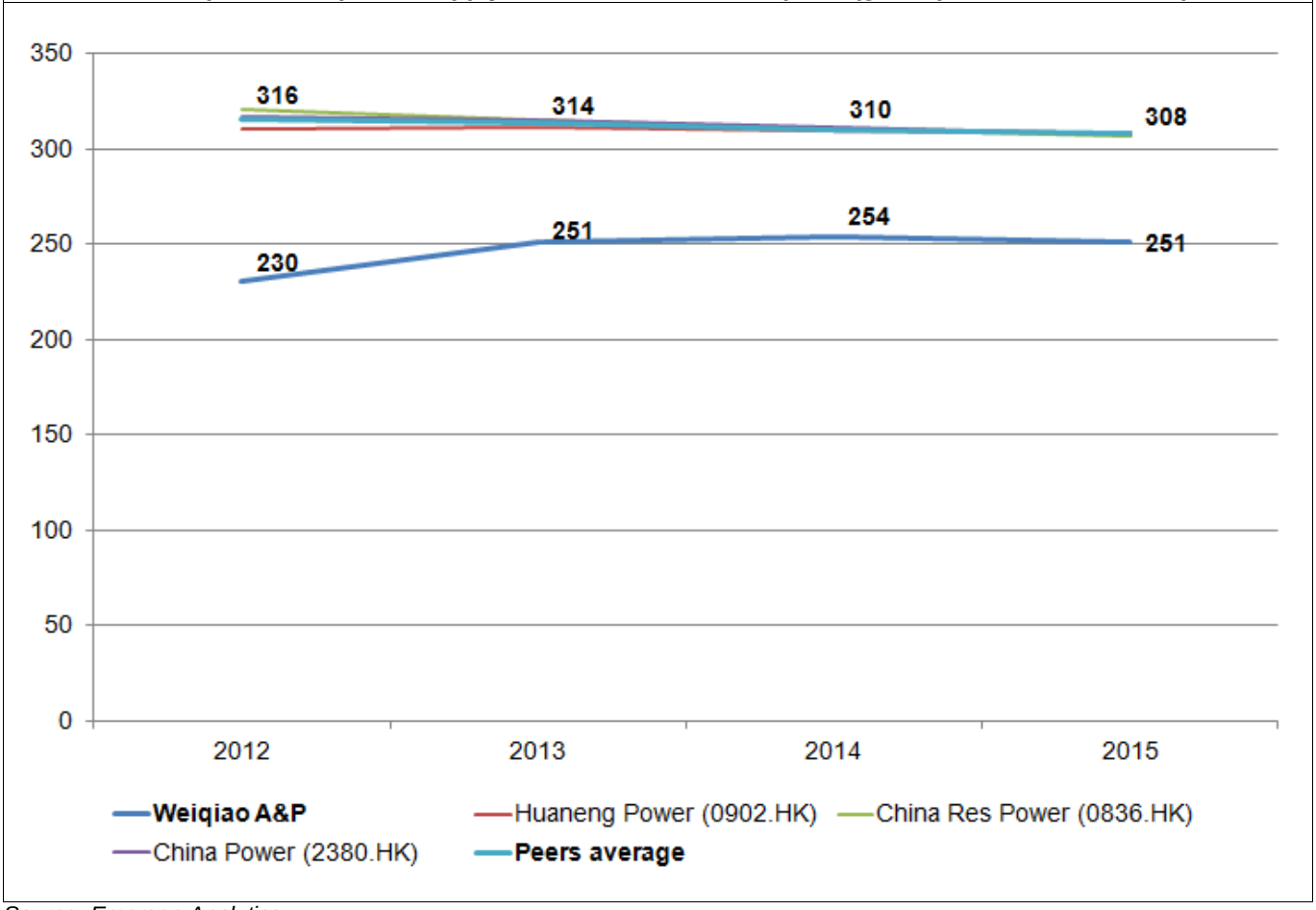
Our Feb 28 report notes that China Hongqiao's power plants mainly use coal of 5,000kcal/kg average thermal heat. If the data above are really power supply "raw" coal consumption, as the company claims, then one can arrive at the company's power supply standard coal consumption data by dividing those numbers by 1.4 (= 7,000 / 5,000). Thus, for example, in 2014, Weiqiao A&P would have reported 254 g/kWh (= 355 / 1.4) of power supply standard coal consumption.

This will then take us to Exhibit 3 below. As we can see, the leading Chinese IPPs, namely Huaneng Power (0902.HK), China Res Power (0836.HK) and China Power (2380.HK), all reported power supply standard coal consumption of some 310g/kWh during 2012-15, with very little variance among their benchmarks. Amazingly, Weiqiao A&P fared significantly better than the Chinese industry leaders.

Given that the traditional coal-fired power generation industry is a matured industry, technological progress has been slow and technical differentiation is limited. The leading Chinese IPPs consistently

reported very similar power supply standard coal consumption, but Weiqiao A&P was able to outperform the market leaders by about 21% on average over the four-year period.

Exhibit 3 – Weiqiao A&P's power supply standard coal consumption (g/kWh) is 21% better than peers'



Source: Emerson Analytics

At the end of 2015, China Hongqiao had total installed electricity generation capacity of 9,330MW, of which 81.4% were 330MW generators, 17.4% were 135MW generators, and the remainder 60MW. By contrast, the leading IPPs tended to use large generators (600MW or more, which are more efficient than the smaller ones). Given this disadvantage, it is inconceivable that Weiqiao A&P can achieve 21% better power supply standard coal consumption than the IPPs.

Taking China Hongqiao's data at their face value, one must believe that its existing power generators are the most advanced "out of this world" generators that have just been "created" by the company's bean counters.

- **"Revolutionary" operations: 2010 power supply "raw" coal consumption fell 18% YoY**

China Hongqiao's "clarification" announcement also reveals its power supply "raw" coal consumption data (Exhibit 4). Compared with the Weiqiao A&P data in Exhibit 2 above, we can see that the figures for 2012-14 are virtually identical. For 2015, China Hongqiao's power supply "raw" coal consumption was mysteriously 9% higher than that of Weiqiao A&P.

According to the "clarification" announcement, China Hongqiao's power supply "raw" coal consumption increased steadily during the 2010-15 period because of generator units improvements and year-by-year decrease of the ratio of heat-to-electricity generation.

Exhibit 4 – Power supply "raw" coal consumption, 2010-15

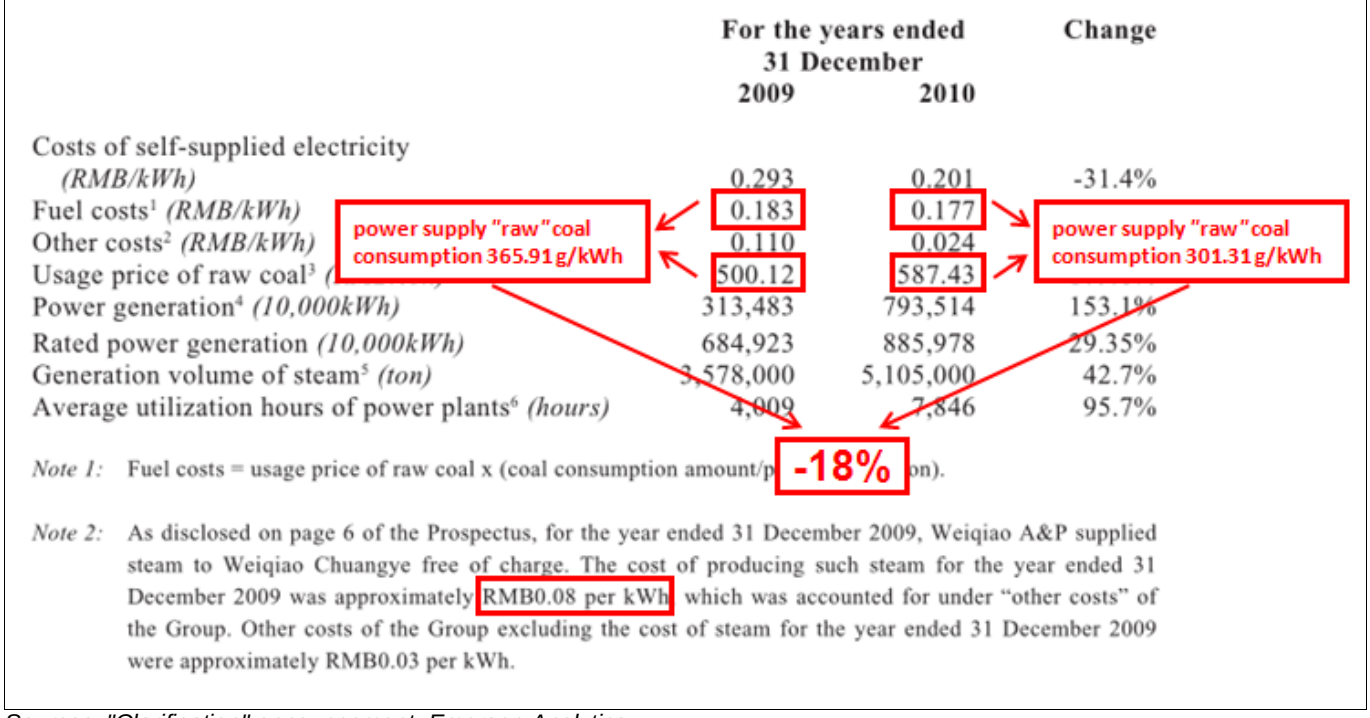
	For the years ended 31 December					
	2010	**2011**	**2012**	**2013**	**2014**	**2015**
Power Supply Raw Coal Consumption *(g/kWh)*	300.00	305.41	322.04	356.05	355.75	381.84

Source: "Clarification" announcement, p.34

China Hongqiao was listed in Hong Kong in 2011, and its IPO prospectus discloses its operational and financial data for 2007-09 and 1-3Q2010. A key question in our Feb 28 report is this: how could China Hongqiao to shave the cost of its self-supplied electricity by 33% in 1-3Q2010 from the 2009 level, when coal price rose 23% during the period?

You can see that Exhibit 4 above cleverly avoids the 2009 data. However, the "clarification" announcement does reveal China Hongqiao's fuel costs and usage price of raw coal for 2009 and 2010, as shown in Exhibit 5 below.

Exhibit 5 – China Hongqiao 2010 power supply "raw" coal consumption down 18% YoY



	For the years ended 31 December 2009	2010	Change
Costs of self-supplied electricity *(RMB/kWh)*	0.293	0.201	-31.4%
Fuel costs[1] *(RMB/kWh)*	0.183	0.177	
Other costs[2] *(RMB/kWh)*	0.110	0.024	
Usage price of raw coal[3]	500.12	587.43	
Power generation[4] *(10,000kWh)*	313,483	793,514	153.1%
Rated power generation *(10,000kWh)*	684,923	885,978	29.35%
Generation volume of steam[5] *(ton)*	3,578,000	5,105,000	42.7%
Average utilization hours of power plants[6] *(hours)*	4,009	7,846	95.7%

power supply "raw" coal consumption 365.91 g/kWh

power supply "raw" coal consumption 301.31 g/kWh

-18%

Note 1: Fuel costs = usage price of raw coal x (coal consumption amount/p on).

Note 2: As disclosed on page 6 of the Prospectus, for the year ended 31 December 2009, Weiqiao A&P supplied steam to Weiqiao Chuangye free of charge. The cost of producing such steam for the year ended 31 December 2009 was approximately RMB0.08 per kWh which was accounted for under "other costs" of the Group. Other costs of the Group excluding the cost of steam for the year ended 31 December 2009 were approximately RMB0.03 per kWh.

Sources: "Clarification" announcement, Emerson Analytics

Fuel costs divided by usage price of raw coal yields power supply "raw" coal consumption. We can therefore calculate that China Hongqiao's power supply "raw" coal consumption was 365.91 g/kWh (= 0.183 * 1,000,000 / 500.12) in 2009 and 301.31 g/kWh (= 0.177 * 1,000,000 / 587.43) in 2010. This implies a significant 18% decline in the 2010 power supply "raw" coal consumption from the 2009 level. Could this be driven by:

- A 42.7% YoY increase in the generation volume of steam in 2010, which should help dilute the production cost of electricity? But power generation rose 153.1% in 2010, which implies a decline in the ratio of heat-to-electricity generation. A lower steam production ratio could only contribute to higher power supply coal consumption.

- A significant increase in the average utilization hours of power plants? Well, higher utilization hours would lower unit fixed costs, but not power supply "raw" coal consumption.

- The use of more large-size, highly efficient generator units in 2010? No! Prior to the end of 2010, China Hongqiao used only 135MW generators. There could not have been any significant improvement in the efficiency of China Hongqiao's electricity generation units.

Compared to the leading Chinese IPPs who could merely maintain a stable power supply standard coal consumption, China Hongqiao is proclaiming a "revolutionary" power plant operating capability by achieving an 18% improvement in its power supply "raw" coal consumption!

- **How much steam do you need to make up a cost of Rmb0.08/kWh?**

China Hongqiao's "clarification" announcement claims that the cost of steam, which amounted to Rmb0.08/kWh in 2009, was recorded in the production cost of electricity.

Let's go over the calculations again. In our Feb 28 report, we have shown that the unit cost of steam was Rmb87/ton (= 336 * 1,000 / 3,873) for 1-3Q2010. Coal cost is also the most significant part of steam production cost. Thus, by referring to the usage price of raw coal in Exhibit 5 above, we can deduce that the cost of steam in 2009 was Rmb74/ton (= 87 / 587.43 * 500.12).

Given the total steam generation of 3,578k tons in Exhibit 5, the total steam generation cost was therefore Rmb264m (= 74 * 3,578 / 1,000) in 2009. With total electricity generation at 3,134.83m kWh in 2009, the unit cost of steam would come to Rmb0.084/kWh (= 264 / 3,134.83). This seemingly "proves" that China Hongqiao's reported cost of steam was correct.

However, China Hongqiao's 2009 steam sales volume revealed in the "clarification" announcement was probably exaggerated by 70%. Steam cannot be stored – whatever is produced is either sold or used internally in its own alumina production, as shown in the data for 2010-15 in Exhibit 6 below.

China Hongqiao supplied steam to Weiqiao Pioneering for alumina production free of charge before 2010. In Exhibit 6 below, the 2,104k tons for 2009 is the volume supplied, according to p.136 of its IPO prospectus. Before 2012, China Hongqiao did not have any self-supplied alumina, accordingly the self-utilized volume was zero before that year.

Exhibit 6 – Steam production, sales and self-utilized volume (k tons)

	2009	2010	2011	2012	2013	2014	2015
Production volume	**3,578**	5,105	5,256	6,756	6,441	6,349	8,286
Sales volume	**2,104***	5,105	5,256	4,058	1,332	1,021	409
Self-utilized volume	**Nil**	Nil	Nil	2,698	5,109	5,328	7,877

Source: "Clarification" announcement, p.23&28
** IPO prospectus, p.136*

If the real output volume of steam was 2,104k tons rather than 3,578k tons, then the cost of steam would have been significantly less than Rmb0.08/kWh. Further, one shall ask whether the cost of steam production has really been recorded separately in the cost of sales since 2010?

Just like the disclosure of power supply "raw" coal consumption in Exhibit 4, the "clarification" announcement also cleverly avoids the 2009 data in its disclosure of steam sales volume.

In the "clarification" announcement, BT Risk Assurance repeatedly claims that they have found "NOT ANY ANOMALIES". But aren't the anomalies that we have discussed above in this report easy to identify? We had to admit that they are smart enough to avoid all those anomalies.

- **Other issues**

Our Feb 28 report notes that China Hongqiao recorded Rmb8.1bn of illicit gains from alumina during 2007-15, with 60% of that coming from Gaoxin A&P. Despite China Hongqiao's repeated claims that Gaoxin A&P has always been an independent third party, the company's former auditor, Ernst & Young, had noted that China Hongqiao had five employees involved in issuing invoices and receipts for Gaoxin A&P. How can this not be a form of actual control? How can you be really independent if someone else is issuing invoices and receipts for you?

Our Feb 28 report points out that the acquisition of Binzhou Binbei was a hidden connected party transaction because Xu Enyun and Jing Wei, Binzhou Binbei's ultimate shareholders, have always been (at least until we published our Feb 28 report) China Hongqiao's senior managers. This is something that can be easily verified from China Hongqiao as well as its business associates such as suppliers and customers, because they were not just any rank and file employees but played important roles in China Hongqiao. Still, BT Risk Assurance chose to say that it has verified that Xu Enyun and Jing Wei had left China Hongqiao in 2011 and 2013, respectively. What can we say about BT Risk Assurance?

- **The audit findings. Wow!**

A pleasant surprise brought by China Hongqiao's "clarification" announcement is the revelation of E&Y's audit findings such as:

1. "The relevant Audit Findings mainly relate to certain inconsistency in the particular forms, components, extracted summary and item orders between bank statements in the Group's financial information and bank statements reprinted at the relevant bank obtained by the Previous Auditor during his work";

2. "As the online banking receipt search system of the bank did not completely capture all banking transactional records, certain financial and accounting transactional records provided by the Group could not be verified by the Previous Auditor through searches carried out using such online banking receipt search system";

3. "The omission by the Group to enter certain accounting entries with respect of part of the transactions";

4. "Relevant banks were unable to complete the on-site printing of all of the bank statements required by the Previous Auditor on the same day when the Previous Auditor carried out the relevant verification"; and

5. "Furthermore, the Audit Findings also highlighted that during the relevant verification, certain bank staff did not provide banking activities chop on the bank statements on the spot upon the Previous Auditor's request due to the requirement of internal approval procedure of chop".

Of course China Hongqiao's "clarification" announcement is able to "explain" all these audit findings, for the omniscient management is capable of explaining all mysteries in this world. For example, point number two above is explained as follows:

> *The failure by the Previous Auditor to verify such financial and accounting transactional records through the Bank Online Searches was due to the fact that the Bank Online Searches did not include a complete bank transactional records carried out over the counter.*

China Hongqiao seems to be saying that if you bank a check at the bank branch counter, you may not be able to see this transaction in your "Bank Online Searches". Well, does your account balance include this amount or not? And if you want to settle a certain payment with this money, do you have to go to the bank branch counter and cannot handle it through your Internet banking system?

Do you react to such ingenious explanation the same way as we do?

We strongly urge the HK SFC to take further regulatory proceedings against China Hongqiao. Similarly, we call on SFC to take further action against China Hongqiao's sister company, Weiqiao Textile Company Limited (2698.HK).

Weiqiao Textile has confessed that a huge amount of its cash had been usurped by its holding company during 2016. Given its exceedingly low average deposit rate achieved over the years (in 2014, the return was even below the 0.35% demand deposit rate), we are convinced that it is just like Sound Global (0967.HK): the reported cash in previous years was either usurped, or simply did not exist.

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We are determined to expose as much of the fraud in the Chinese stock market as we can. The most widespread and serious fraud is probably that undertaken by listed companies, in fabricating non-existent businesses and stealing shareholders money, among other tricks.

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