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**Sent:** June-27-11 2:47 PM

**To:** 'gord@gordonmurray.ca'

**Subject:** Updates on RPS

Gordon,

I had BC Trade and Investment Office in Seoul to get some updates on RPS. I hope the following update help our industry understand the situation in Korea better.

Regards,  
Sookyung

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The following is the discussion we had with Min-Cheol Kim, Manager of KNREC (New Renewable Energy Center) [http://www.energy.or.kr/knrec/12/KNREC120700\\_02.asp](http://www.energy.or.kr/knrec/12/KNREC120700_02.asp)

This is the official organization handling RPS. He said that RPS has been stipulated by law and this law will take effect as of Jan. 1 2012.

He clearly confirmed that it's a law and there will be no exceptions.

- 1) RPS timing – Jan. 1 2012
- 2) PKS – Classified as waste. Not acceptable as NRE source

The assumption is that companies are watching which company will initiate the deal first and also the initial volume (1<sup>st</sup> year) is relatively minor; it will jump into the biomass source from the end of Y2011 and Y2012 period. The first import elsewhere would initiate 2H 2012, 1H 2013. This means that more serious volume of trade would be generated from Y2013. We all know that the LGI's contact points would be entirely 13 companies as it's obvious that the No. of compulsory supplier is 13 as follows;

RPS targets are power utility companies generating over 500MW and Hydro Power, KDHC

Total: 13 companies

Over 500MW power generation (Group I ) Y2012 Total NRE ratio 7,299GWh	Less than 5,000MW power generation (IPP) (Group II)
Korea Hydro Nuclear Power Co., Ltd. (KHNP) – 2,449 GWh South East Power Co., Ltd (SEP) – 1,080 GWh Korea West Power Co., Ltd. (KWP) – 976 GWh Korea Southern Power Co., Ltd., (KOSPO) – 965 GWh Korea Midland Power Co., Ltd (KOMIPO) – 953 GWh Korea East West Power Co., Ltd. (KEWP) – 875 GWh	Korea District Heating Corporation (KDHC) K-Water Corporation SK E&S (SK E&S is under M&A process. Used to be K-Power) GS EPS GS Power POSCO Power MPC (Yulchon)
6 companies (Gencos)	7 companies
Opinion : Compulsory ratio should get lowered REC per the NRE source should be higher.	Opinion: Industry would like to encourage

□ **Annual compulsory RPS ratio**

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Compulsory Ratio (%)	2.0	2.5	3.0	3.5	4.0	5.0	6.0	7.0	8.0	9.0	10.0
MW	200	220	240	260	280						

□ **RPS Compulsory Generation Volume = Fossil Fuel Power Generation Volume x Annual RPS ratio**

□ **REC**

0.25	IGCC, Gas
0.5	Waste, Landfill gas
1.0	Hydro, Ground wind power, Bioenergy, RDF firing, (wood pellet co-firing) Waste gasification power generation, tidal power
1.5	Wood biomass full firing, Ocean wind power (Below 5km)
2.0	Ocean wind power (Above 5km), Tidal power, Fuel Cell

Official Certification / Trading Organization: Korea Energy Corporation (NRE Center) – 26 RPS Business unit – Under the Ministry of Knowledge and Economy

Market prediction over bioenergy

Quote: The demand over ocean wind power, tidal power, and bioenergy is anticipated to grow.

**Utility firm (Over 500MW)**

KEWP – Fuel Cell + Wind power + biomass (less than 10%)

KWP – Fuel cell

KOMIPO – Biomass

KOSPO – Biomass

**IPP (Below 500MW)**

GS EPS – PKS, RDF

GS Power – Fuel cell

POSCO Power – Fuel cell

SK E&S (Used to be K-Power. It's in the process of M&A) – SK Forest's family company under SK Group. SK Forest is going to supply to SK E&S. SK E&S is investing into KWP. (Shareholding position)

At this point, it's only KOMIPO yet that declared the biomass energy source for its NRE. Other power firms are not yet determined.

In the Korean industry, it is allegedly said that some vendors from overseas assert that it can supply wood pellet with CIF 100 and under. All the firms are studying the biomass.