

Trend and Prospect of renewable energy Project Finances and Funds in Korea

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Kookmin Bank

1. Renewable Energy Funds and P/Fs in Korea

■ A series of environmental agreements, including Kyoto protocol, Marrakesh Accords, and Bali Roadmap, shows impending materialization of CO₂ emission limitation.

➡ Leading to a higher interest on renewal energy, such as wind, solar, and tidal power plant business.

< List of Renewable Energy PFs in Korea >

Year	Financial Institution	Project
2005	KB	Korea's 1 st Solar power plant P/F Closing (KRW 14bn., 1.65MW)
2007-2008	KB	Launched KRW 330bn. Renewable Energy Blind Fund (11 shareholders)
	KB	Arranged KRW 200bn. in 6 Solar power plant P/F (35.3MW)
	SC First	Arranged KRW 150bn. in Shinan Solar power plant P/F (24MW)
	Samsung Life Insurance	Arranged KRW 120bn. in Kimchun Solar power plant P/F (18.4MW)
2009	KB	Arranged KRW 59bn. in Cheju Wind power plant P/F (33MW)

■ Since 2005, renewable energy P/Fs and funds have been executed focused on solar power plant.

2. Corporate Lending for Green-related Businesses

- Apart from Project Financings, Corporate loans that were launched to support green growth companies and solar power generators are as follows;

<Corporate Financing Green Product List>

Category	Product	Bank	Note
Green growth corporate loan products	KB Green Growth Loan	KB	-Outstanding balance of KRW 594.2bn. (as of 2010.5) -Providing special Interest rate discount for the companies which won the green growth industry awards
	Green Growth Corporate Loan	IBK	-Green technology corporations and environmentally certified corporations
	Strategic Special Facility Loan	KDB	-Environment industry and renewable energy corporations -Energy efficiency enhancing corporations
Solar power plant loan products	Solar Biz Loan	KB	-Focused on solar power plants construction
	Solar Loan	Hana	
	Solar Power Loan	Shinhan	

3. Trend & Features of P/Fs in Asia

- Since the crisis of 2008, Project Financing (“P/F”) market of Europe and US has shrunken.
 - ➡ Asian P/F market in the 1st half of 2009 has also contracted in half to USD20 bn. over the previous year.
- However, it is noteworthy that the market share of power industry, including renewable energy, increased 16.6%p to 46.2%.

<P/Fs by Industry in Asia>

Industry Analysis							
Borrower Industry	2009.1.1~2009.6.30			2008.1.1~2008.6.30			Chg. In Mkt. Share
	Proceeds US\$m	Mkt. Share	No. Issues	Proceeds US\$m	Mkt. Share	No. Issues	
Power	9,090.1	46.2	16	11,261.1	29.6	21	16.6 ▲
Transportation	3,722.4	18.9	18	6,289.0	16.5	31	2.4 ▲
Telecommunications	2,841.8	14.4	4	2,378.0	6.2	2	8.2 ▲
Petrochemicals	2,088.0	10.6	3	1,000.0	2.6	2	8.0 ▲
Industry	741.4	3.8	5	1,804.3	4.7	3	-0.9 ▼
Oil & Gas	545.9	2.8	3	3,022.6	7.9	9	-5.1 ▼
Leisure & Property	498.2	2.5	9	7,911.4	20.8	19	-18.3 ▼
Industry Total	19,527.8	100	59	38,080.9	100	103	

4. Changes in Feed-In-Tariff Program

- With the changes in Feed-In-Tariff (FIT) program, standard price has fallen so that financing support for renewable energy industry (especially for solar power generation) has been on a downward trend since 2008.

<Changes in FIT Program>

Category	Note
Policy Initiation (2002.5)	-Introduced standard price policy for renewable energy power plant -Set 5 year application period for the energy sources - Solar power plant, Wind power plant
1st Revise (2003.10)	-Extended subsidy supporting period to 15 years for Solar and Wind power plant -Established new capacity restriction (Solar 20MW, Wind 250MW)
2nd Revise (2004.10)	-Included tidal power plant into the applicable energy sources
3rd Revise (2006.10)	-Adjusted standard price and applied decreasing rate by the economic evaluation across the sources -Added fuel cell power plant(up to 50MW) into the applicable energy sources -Changed the capacity limitation (Solar 20MW→100MW, Wind 250MW→1,000MW, Fuel Cell 50MW)
4th Revise (2008.5.14)	-Extended application period of standard price (unified into a 15 year period, except solar power) -Expanded capacity restriction (Solar 100MW→500MW) -Changed Solar FIT standard price (KRW 677.38/kWh → KRW 561.33 ¹ /kWh)

Note (1) 15 year case, over 1MW Capacity

5. Major Wind Farm Projects

■ Onshore wind power generation emerging as the major sector among renewable energy sources:

➡ Thanks to its low power generation cost, wind generation is competitive enough even under SMP(System Marginal Price), market price of electricity.

<Major Wind Farms under Feed-In-Tariff(FIT) Program>

Category	Completed	Capacity (kW)	Location	Company
Hankyung Wind Farm	2004.2	6,000	Cheju Island	Korea Southern Power Co. Ltd
	2007.12	<u>15,000</u>		
		total 21,000		
Youngduck Wind Farm	2004.12	11,550	Youngduck-Gun Kyungsangbuk-Do	Youngduck Wind Farm Co. Ltd
	2005.2	8,250		
	2005.3	<u>19,800</u>		
		total 39,600		
Kangwon Wind Farm	05.12	28,000	Pyungchang-Gun, Kangwon-Do	Kangwon Wind Farm Co. Ltd
	2006.8	20,000		
	2006.9	<u>50,000</u>		
		total 98,000		
Yangyang Wind Farm	2006.6	3,000	Inje-Gun, Kangwon-Do	Korea Midland Power Co. Ltd
Samdali Wind Farm	2009.9	33,000	Cheju Island	Hanshin Energy Co. Ltd

6. Prospect for Introduction of RPS

■ **Renewable Portfolio Standard(RPS)¹ is to be introduced nation-wide in 2012.**

➡ **RPS is currently under testing.**

< Policy Direction of Support for Power Industry >

2002	2006~2008	2009~2011	2012
Feed-In-Tariff(FIT) Initiated	Maintain FIT		FIT to be abolished
-	RPA ² 1 st period	RPA 2 nd period	RPS to be Introduced

Note (1) RPS (Renewable Portfolio Standard): a new mandatory policy to charge renewable energy ratio to the electricity production

(2) RPA (Renewable Portfolio Agreement): an agreement on spontaneous renewable energy supply)

■ Financial Institutions are also actively preparing P/F and considering new renewable energy funds.

7. Plan for Wind & Tidal Power Generation Projects

- Especially, financial institutions are focusing on onshore/offshore wind power plant and large-scale tidal power plant business.

<Planned Projects in Wind & Tidal Power Plant>

Category	Region	Corporate Sponsor	Capacity
Wind power	8 cities/county	-Korea Southern Power, Hyundai heavy, KIC	200MW
	Taebaek	-Korea Southern Power	20MW
	Jungsun	-East west Power	20MW
Tidal power	Karorim bay	-Korea Western Power	540MW
	Inchoen bay	-Korea Hydro & Nuclear Power	1.3GW

- With technological advances in renewable energy and active government support, Korea's renewable energy P/Fs and Funds are expected to be buoyant.
 - KB Kookmin Bank is planning to expand support for renewable energy projects including the ones linked with carbon credit.