Korea's RPS, which requires that power generation companies obtain a minimum percentage of their generation by using renewable energy, will take effect in 2012. Based on the first-year law enforcement, generation companies have to satisfy 2% of RPS compliance ratio in 2012. Then, the required RPS compliance ratio will increase up to 10% in 2022. Thus generation companies need to construct power plants that utilize various types of renewable energy sources such as PV and wind power. This work is aimed to analyze the cost of such a renewable power source in terms of capital cost, capacity factor, and fuel cost. We provide the analytical expectation on the renewable power generation cost of 2012 focusing on PV, onshore/offshore wind, fuel cell, and IGCC, which are focused by government policy.

**Key words**: renewable energy, generation cost, forecast, RPS

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