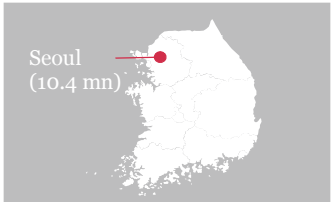
MARKET OPPORTUNITY

Korea

GREEN ENERGY TECHNOLOGIES

OVERVIEW

- The Korean government invested €1.5 billion in the renewable energy sector in 2015.
- Forecasted public investment in 2017 will reach €3.75 billion.
- Renewable energy, particularly wind power and solar photovoltaic panels are considered as key growth areas.
- Korea aims to be the world's 5th largest renewable energy powerhouse.



Investment in 2017
€ 3.75 billion

Job creation
14,000

An Energy Valley in Naju City

Business Opportunities for EU companies

1.	Offering technologies and solutions for **Energy Prosumers**: smart grids; zero-energy buildings; eco-friendly energy towns; household photovoltaics
2.	Specialising in **Low-carbon Power Generation**: energy storage systems (ESS); ultra-supercritical (USC) generation systems; mega gas turbines; carbon capture and storage (CCS); ultra-high-voltage direct current (HVDCs); low-voltage direct current (micro-grids)
3.	Offering technologies in the **Waste-to-Energy** sub-sector, including waste energy recycling
4.	With technologies for offshore wind power; solar PV; energy efficient electric grid(lines); intelligent power ICT-systems
5.	Systems-based technologies for building energy management systems (BEMS); factory energy management systems (FEMS); home energy management systems (HEMS)
6.	Specialising in environmentally-friendly refrigerants

Sector Characteristics

- Lack of natural resources and steadily increasing dependence on overseas energy imports. Emphasis on renewable energies in a bid to enhance energy self-sufficiency and tackle climate change.
- Plans to foster a "New Energy Industry" comprised of Energy Prosumers, Low-Carbon Development, Electric Vehicles and Environmentally-friendly processes.
- Plans to establish the "Energy Valley", a global hub city for smart energy in Naju, South Jeolla province. MOU signed with 25 leading energy firms including ABB Korea, the valley's first foreign investor.
- Waste-to-Energy sub-sector currently holds the largest share of the energy portfolio. 50% jump in demand expected between 2017 and 2019.

Funded by the European Union

MARKET OPPORTUNITY

Korea

GREEN ENERGY TECHNOLOGIES

OVERVIEW

- Renewable energy accounts for less than 5% of total power generation and is planned to increase to 11.7% by 2029 according to the 7th National Energy Plan.
- High demand in the Solar PV and Wind Power sub-sectors given expected year-on-year increases in their share in the energy portfolio.

Key Players

Hanwha	Hanwha achieved vertical integration in the value chain of solar PV industry through Hanwha Chemical (Polysilicons), Hanwha Solarone (Ingots/Wafers, Cells, Modules) & Hanwha Solar Energy (Balance of Systems (BOS)).
OCI	OCI holds strong presence in the solar PV industry, especially in Polysilicon, BOS and overseas project development.
S-Energy	S-Energy is a PV module manufacturer and market leader of solar PV lease to household, and also an O&M (Operation & Maintenance) service provider.
Vestas	Vestas reached an installed capacity of 226 MW in South Korea, accounting for about half of the total wind energy capacity in Korea.
LG Chem	LG Chem succeeded in developing a lithium-ion battery for the first time in Korea. Its battery has since been used for a variety of devices such as smartphones and laptops.
SAMSUNG SDI	SAMSUNG SDI is the strongest player in selling the mid- and large-sized rechargeable battery unit on the back of anticipated greater demand for EVs/ESSs.
KEPCO	KEPCO focuses on four key areas: peak reduction, load standardization, reduction in power transmission/distribution loss, response to new & renewable energy and reduction in black-out time in developing its smart grid business.

Key Sub-sectors and Technologies

1.	Solar Photovoltaics
2.	Wind Power
3.	Energy Storage Systems (ESS)
4.	Smart Grids
5.	Building Environments and Green Architecture

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