



Investor Relations

Global Power EPC Company

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Disclaimer

This material has been produced to provide investors with various information in order for them to get more understanding about KEPCO E&C based on the objective facts as best as we can.

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Company Overview



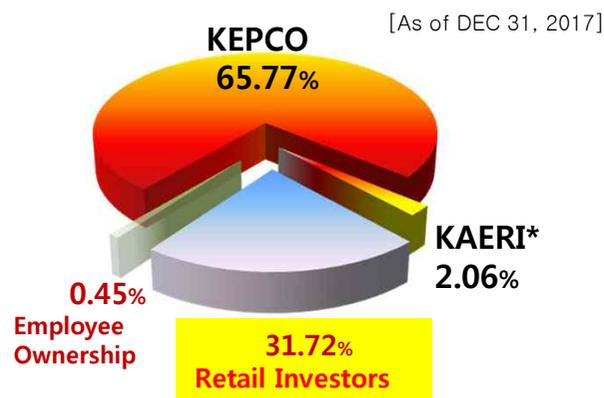
Korea's Leading Power Plant Engineering Company

- Korea's leading provider of design and engineering for nuclear, thermal and hydro-electric plants with over 40 years of experience
- Current 100% market share in nuclear power plant design in Korea
- The world's most competitive engineering company specialized in the two sectors: A/E and NSSS
- Expanding its business to Thermal EPC, energy-related business, environment-friendly business, etc.

Corporate Information

CEO & President	<p>Lee, Bae Soo</p> <ul style="list-style-type: none"> • Former vice president, KEPS • Former advisor, Samsung Engineering
Foundation Date	October 1, 1975
Employees	2,233 (As of December. 31, 2017)
Business Area	Power plant design & engineering, etc.

Ownership



* KAERI - Korea Atomic Energy Research Institute

IPO Information

Shares Outstanding *Common shares 100%	38,220,000
Listing Date	December 14, 2009
Offered Securities	7,644,000

Dividends

[Unit : KRW]

FY	2013	2014	2015	2016
Dividend Propensity*	45%	40%	25%	24%
Amount (per a share)	406	575	200	110

* Dividend Propensity – Dividend/Net Income *100

Business Overview



Business Area

• Design & Engineering

- Nuclear Power Plant
- Thermal Power Plant
- Combined Cycle Power Plant
- Cogeneration Power Plant

• O&M (Operations & Maintenance)

- Technology & Engineering Support for Operating Power Plants



• Energy Solution Package

- Funding
- Consulting
- Procurement
- Post-management

• Environmentally-friendly Biz.

- FGD System / DeNOx System
- ESCO, Renewable Energy
- Water Pollution Control
- Wastewater Treatment Facilities

• National Defense Project.

- Government's task

Business Area – Design & Engineering

- All of the local nuclear power plants have been independently designed by KEPCO E&C since 1993
- Experiences of Coal fired/ CFBC Coal fired/ Combined Cycle/ Cogeneration Design

Major Project Experience

• Nuclear power

Reactor	Project	Project Period	Client
APR 1400	Shin-Kori #5,6	Apr '14 ~ Mar '22	KHNP
	UAE #1,2,3,4	Mar '10 ~ May '20	KEPCO
	Shin-Hanul #1,2	Dec '07 ~ Dec '19	KHNP
SMART	PPE BOP	Jun '16 ~ Nov '18	KAERI

• Thermal power

Capacity (MW)	Project	Project Period	Client
1000x2	Gosung Greenpower	May '14 ~ Jul '21	SK E&C
1000x2	Gangneung Anin	Feb '14 ~ Sep '20	Samsung C&T
1000	Shin-seocheon	Jun '14 ~ Dec '19	Korea Midland Power
1000x2	Taeon #9,10	Jun '11 ~ Dec '17	Korea Western Power

• Others

Reactor	Project	Project Period	Client
Other	APR1400 US NRC DC design/licensing support - Stage 2	Aug '14 ~ May '19	KHNP

Services performed

- Site selection and feasibility survey
- Engineering and design
- Construction/Project management, licensing support, quality assurance and inspection
- Support for purchasing, owner support, education/training

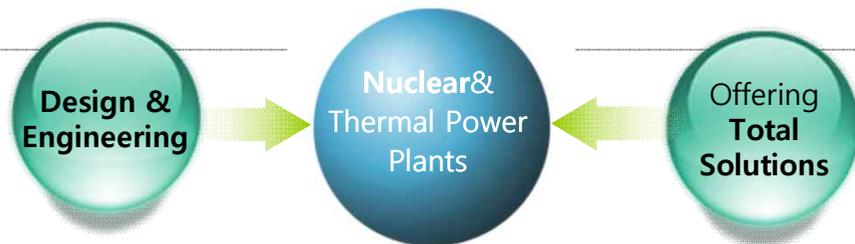


Business Area – O&M



Contribution to the Improvement of the Operating Power Plants' Operability, Efficiency and Safety

• O&M (Operations & Maintenance)



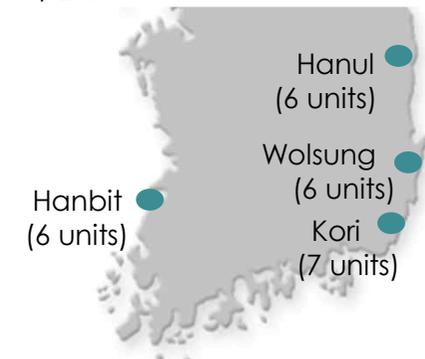
• Nuclear Power Plants in Operation in Korea

Reactor	Project	First Power	Design
APR 1400	Shin-Kori #3	2016	KEPCOE&C
OPR 1000+	Shin-Wolsung #1,2	2012 / 2015	KEPCOE&C
	Shin-Kori #1,2	2011 / 2012	KEPCOE&C
OPR 1000	Hanul #5,6	2004 / 2005	KEPCOE&C
	Hanbit #5,6	2002 / 2002	KEPCOE&C
	Hanul #3,4	1998 / 1999	KEPCOE&C
	Hanbit #3,4	1995 / 1996	KEPCOE&C-WEC
CANDU PHWR	Wolsung #3,4	1998 / 1999	AECL-KEPCOE&C
	Wolsung #2	1997	AECL-KEPCOE&C
	Wolsung #1	1983	AECL-CANATOM
PWR	Hanul #1,2	1988 / 1989	Framatome
	Hanbit #1,2	1986 / 1987	Bechtel-KEPCOE&C
	Kori #3,4	1985 / 1985	Bechtel-KEPCOE&C
	Kori #1,2	1978 / 1983	WEC-Gilbert



Services performed

- Technology support and engineering services
- Replacement design of key equipment
- Increase the output of power plants
- Design facility improvement of power plants in operation
- Technical support for license application and new regulatory requirements



*The Uljin was renamed Hanul

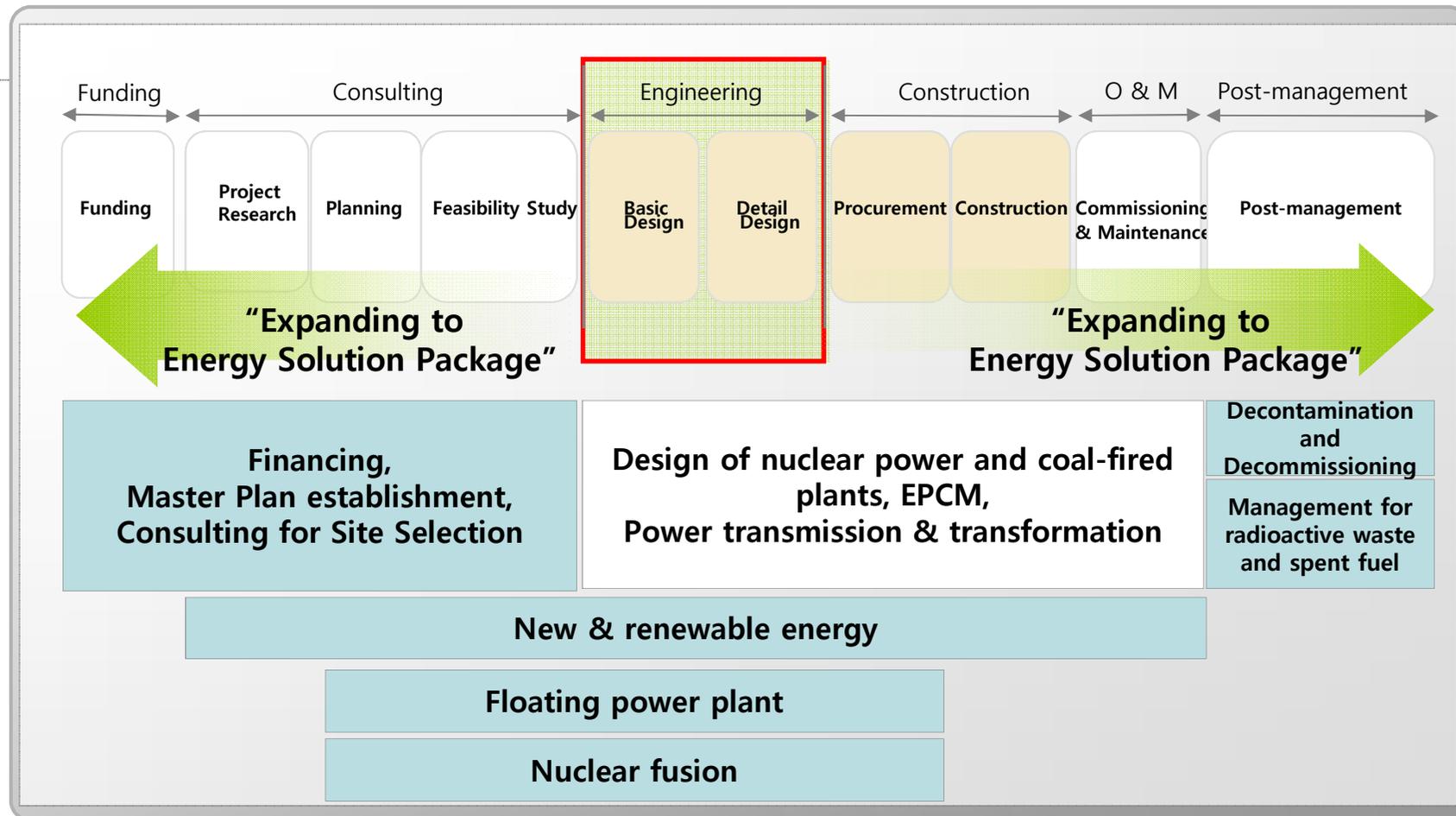
*WEC – WestingHouse Electric.

*AECL – Atomic Energy of Canada Limited

Business Area – Energy Solution Package

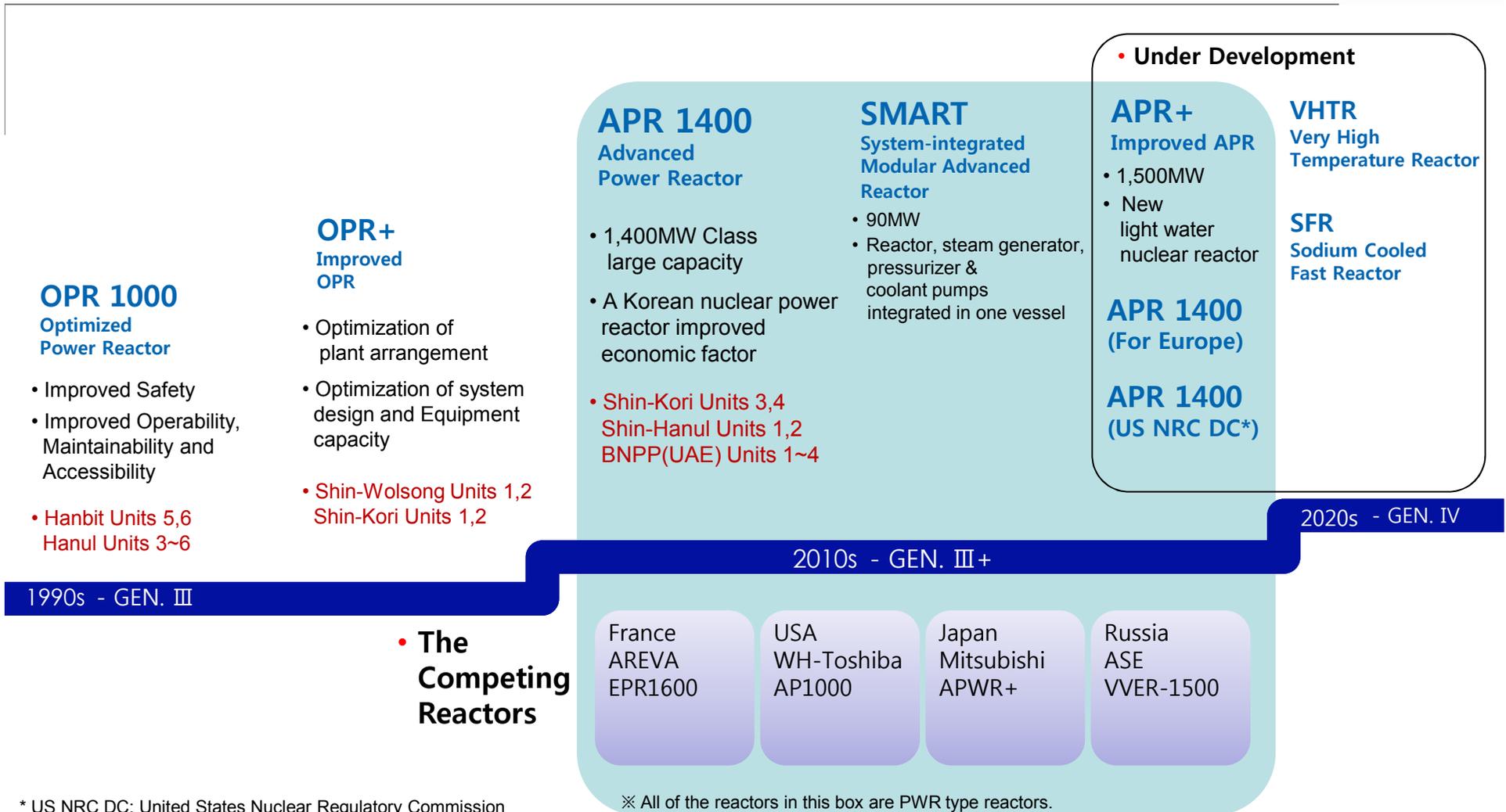


Expanding its business areas to the overall value chain, including pre- and post-management of power plants



Technology – Nuclear Power Plant

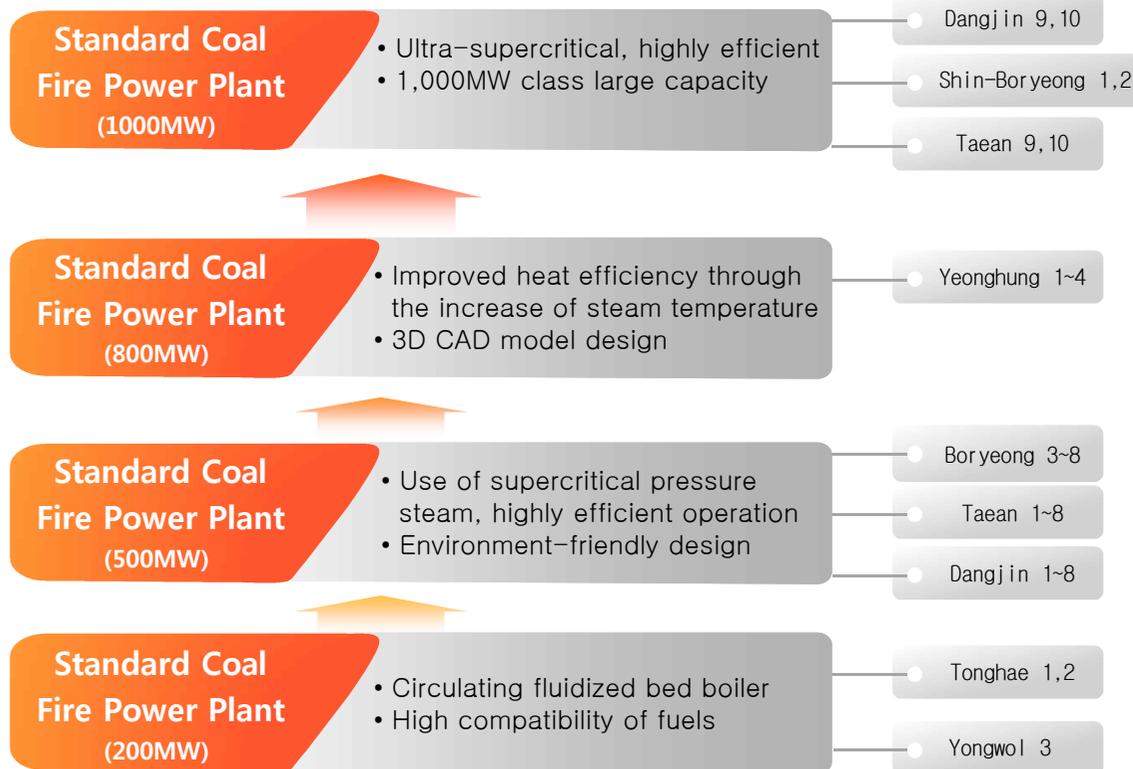
Korean Nuclear Power Plant Design Development



* US NRC DC: United States Nuclear Regulatory Commission Design Certification

Technology – Thermal Power Plant

Coal-Fired Power Plant Design Development



• **Dangjin #1~4- World Best Project Awarded**
<US, Power Engineering, 2001>



• **Boryeong #3,4 – World Best Project Awarded**
<US, Electric Power International, 1996>

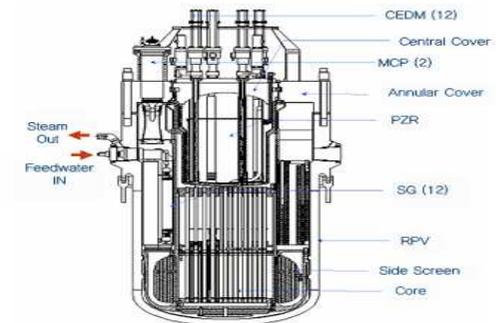
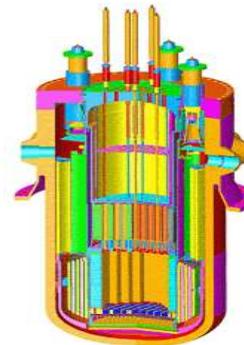
Focus on 10 core businesses in 5 areas



Nuclear power plans – Small Units & Others

• SMART export plan

- **SMART - Integral type reactor**
 - steam generator, pressurizer, and coolant pump are all integrated into one vessel.
- 90MW of electricity output, 40,000ton/day of desalination capacity
 - can supply a city with a population of 100,000
- Year 2012 : Acquired SDA(standard design approval) in Korea. (the first SDA as integral type reactor in the world)
- Year 2013 : Cooperation agreement with Saudi Arabia on the introduction of SMART in Saudi Arabia
- Year 2015 : Signed a deal to jointly invest in studying the prospect of building at least two SMART in Saudi Arabia
- Year 2017 : Performing PPE(Pre-Project Engineering) to build two SMARTs in Saudi Arabia



• Participation in the international project – ITER

- International Thermonuclear Experimental Reactor(ITER) Project
- 7 countries that run the project – EU, U.S., Russia, China, Japan, India and South Korea
- Total amount of orders KEPCO E&C has received : 57.3 KRW bn. (expecting more orders)

Nuclear power plans – Decommissioning



• Decommissioning

▫ The oldest reactors in Korea

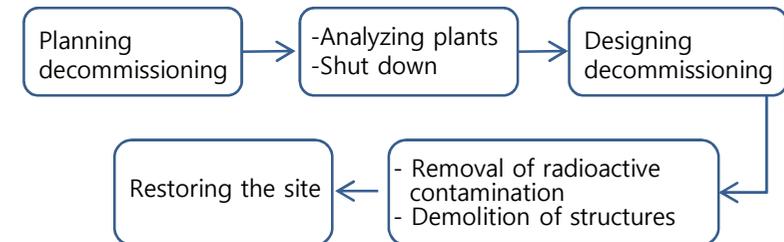
Plant	Commercial operation	Planned close	
KORI #1	1978	2017	license extended 2007 → 2017
Wolsung #1	1983	2012	license extended 2012 → 2022
KORI #2	1983	2023	
KORI #3	1985	2024	
KORI #4	1986	2025	

- Kori-1, the first nuclear power plant in Korea, is scheduled to become the first reactor to go dormant.
 - it had 30-year lifespan expired in 2007, but gained approval of additional 10-year operation.
- The Korean government announced in June, 2015 that the development of the 17 decommissioning techniques that have yet to be finished would be completed by 2021.

• Decommissioning?

- series of various follow-up processes upon the completion of operation regarding nuclear power plant facilities.
- Minimization of radioactive contamination from facilities after decontamination and decommissioning.
- Republic of Korea and UK have strengthen cooperation in the research on nuclear decommissioning.

• Decommissioning Flow

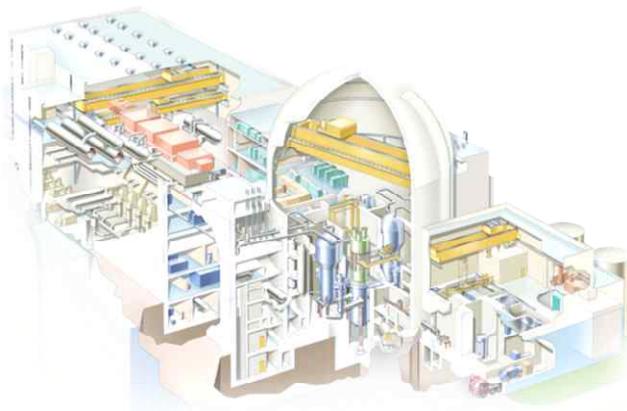


Finding for new growth engine



Launch of NPP Decommissioning Business Department and Energy Division

- To respond to new energy policy of the government
 - The phase-out of nuclear power plants, decommissioning the Kori-1 reactor and the suspension of building new coal-fired plants.
 - Established Energy Division and NPP Decommissioning Business Department to create new sustainable growth engine.
- To establish NPP Decommissioning Business Department
 - Focusing on post-management of nuclear power plant such as decommissioning and managing radioactive waste and spent fuel.
 - Acquired decommissioning-related technology by "decommissioning technology transfer agreement" with PreussenElektra GmbH Concluded in 2016.
 - Accumulating technical know-how by participating in Kori-1 decommissioning and advancing into overseas market
- To organize Energy Division
 - Leading the energy market by meeting the demand to lower fine dust level and to respond to "Paris Agreement(2015)"



200MW CFBC Power Plant Cutaway



- Site plan key
- A. Boiler Building
 - B. Turbine Building
 - C. Control Building
 - D. Auxiliary Water Storage
 - E. Electrostatic Precipitator
 - F. Stack
 - G. ID Fan
 - H. Transformer

