



Investor Relations

Global Leading Energy Solution Partner

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.

However, the numbers in this material may be subject to change without notice and the company does not guarantee the correctness and completeness.

This presentation contains forward-looking statements, which are subject to risks, uncertainties, and assumptions.

No representation or warranty, expressed or implied, is made and no reliance should be placed on the accuracy, actuality, fairness, or completeness of the information presented.

This presentation does not constitute an offer or invitation to purchase or subscribe for any shares of the company, and no part of this presentation shall form the basis of or be relied upon in connection with any contract or commitment.

Company Overview



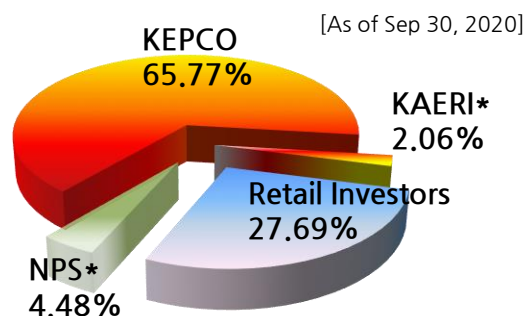
Korea's Leading Power Plant Engineering Company

- Korea's leading provider of design and engineering for nuclear, thermal and hydro-electric plants with over 45 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	Lee, Bae Soo • Former vice president, KEPS • Former advisor, Samsung Engineering
Foundation Date	October 1, 1975
Employees	2,342 (As of Sep 30, 2020)
Business Area	Power plant design & engineering, etc.

Ownership



* KAERI - Korea Atomic Energy Research Institute

* NPS - National Pension Service

IPO Information

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

Dividends

[Unit : KRW]

FY	2017	2018	2019	2020
Dividend Propensity*	40%	41%	45%	53%
Amount (per a share)	220	140	310	282

* 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

Eco-friendly Business

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

National Project

- Government's task

Business Area - Design & Engineering



Leading the standard designs of nuclear power plants and coal-fired power plants

Current Major Project

Nuclear power/Reactor

Project	Project Period	Contract Amount (*)	Client
Shin-Kori #5,6	Apr '14 ~ Mar '23	4,239	KHNP
Shin-Hanul #3,4	Mar '16 ~ Dec '23	4,263	KHNP
UAE#1,2,3,4	Mar '10 ~ Dec '20	7,813	Kepco
Baraka Nuclear Power Plant LTEA	Jan '18 ~ Jan '31	3,400	Nawah Energy Company

Thermal power

Project	Project Period	Contract Amount (*)	Client
Shin-seochon	June '14~June '21	691	KMP
Goseong Greenpower	May '14~Jan '22	886	SK E&C
Gangneung Anin	Feb '14~June '23	1,031	Samsung C&T
Taeon #9,10	June '11~Sep '24	1,128	KWP

Others

Project	Project Period	Contract Amount (*)	Client
Shin-Kori #5,6 Management Configuration	Feb '19 ~ Oct '23	246	KHNP

(*) Unit : 100 million won.

Services performed

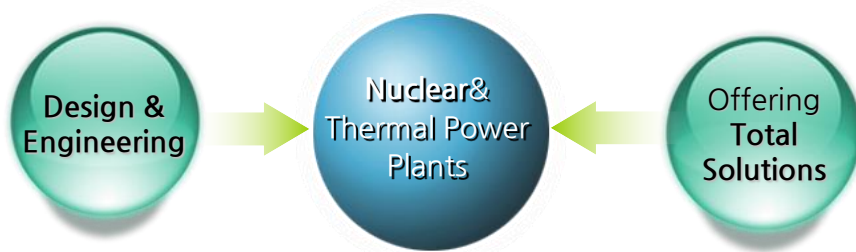
- Site selection and feasibility survey
- Engineering and design
- Construction/Project management, licensing support, quality assurance and inspection
- Support for purchasing, owner support, education/training



Business Area – O&M

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

• O&M (Operations & Maintenance)



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



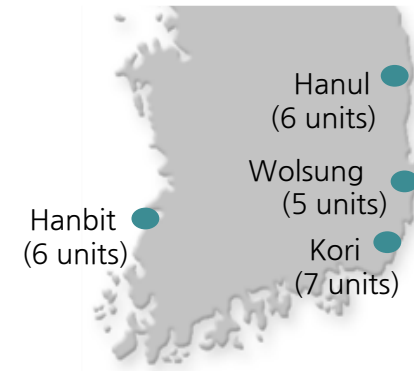
• Nuclear Power Plants in Operation in Korea

Reactor	Project	First Power	Design
APR 1400	Shin-Kori #3,4	2016 / 2019	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
PWR	Hanul #1,2	1988 / 1989	Framatome
	Hanbit #1,2	1986 / 1987	Bechtel-KEPCOE&C
	Kori #3,4	1985 / 1985	Bechtel-KEPCOE&C
	Kori #2	1983	WEC-Gilbert

*The Uljin was renamed Hanul

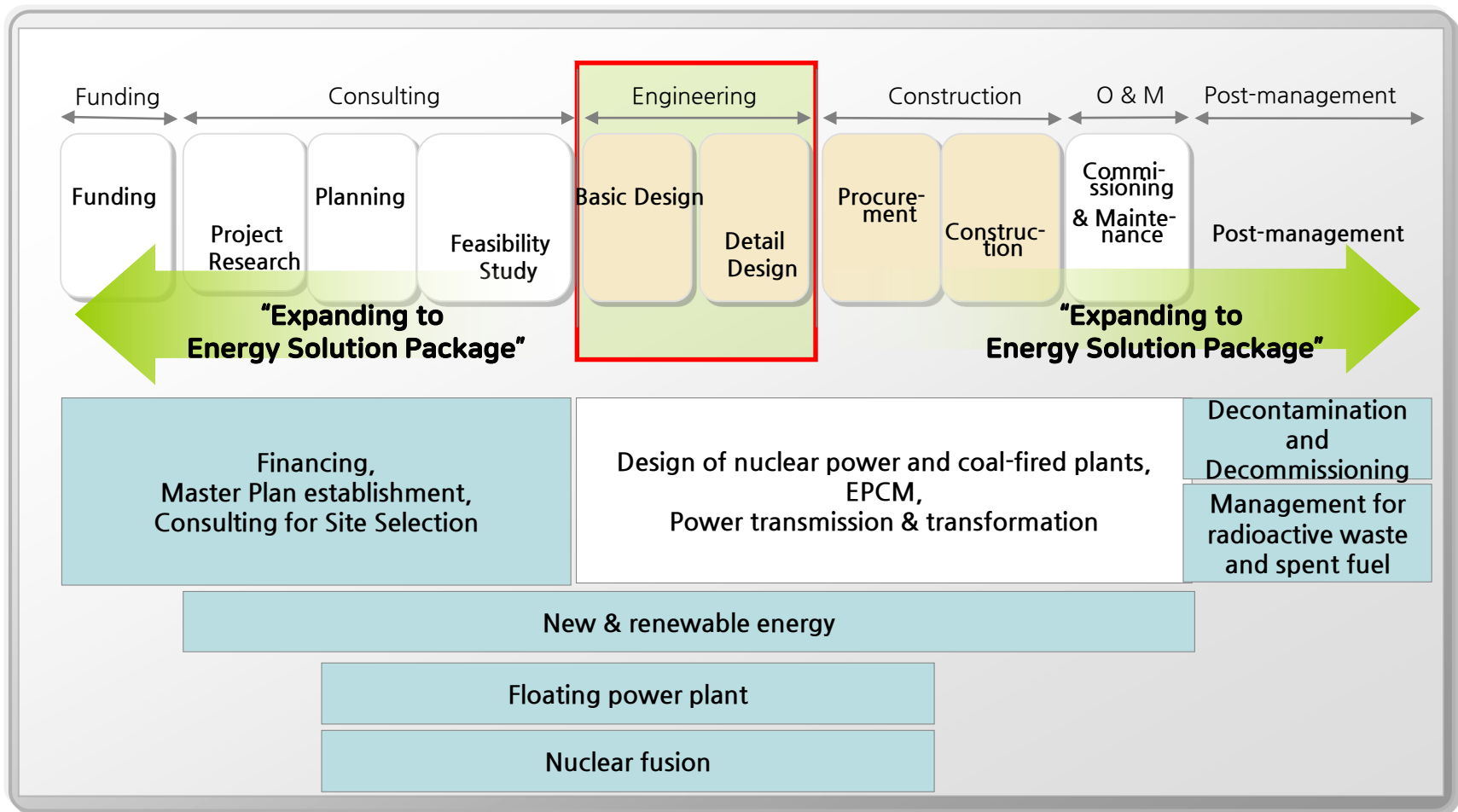
*WEC - WestingHouse Electric.

*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



Business Area – Eco-Friendly Business and National Business

Developing eco-friendly business and leading the development of national technology as the only listed public-company specialized in engineering

Eco-Friendly Business

*Removal of Sulfur oxide and Nitrogen oxide,
Development of eco-friendly technology such as
CCS*



Prevention of optical smog, respiratory system and skin diseases/ Being accordance with Paris Agreement

- Flue gas desulfurization
- Flue gas denitrification
- CCS(Carbon Capture Storage)
: Lowering the level of greenhouse gas
- Prevention of water pollution/
Location selection and Environmental evaluation

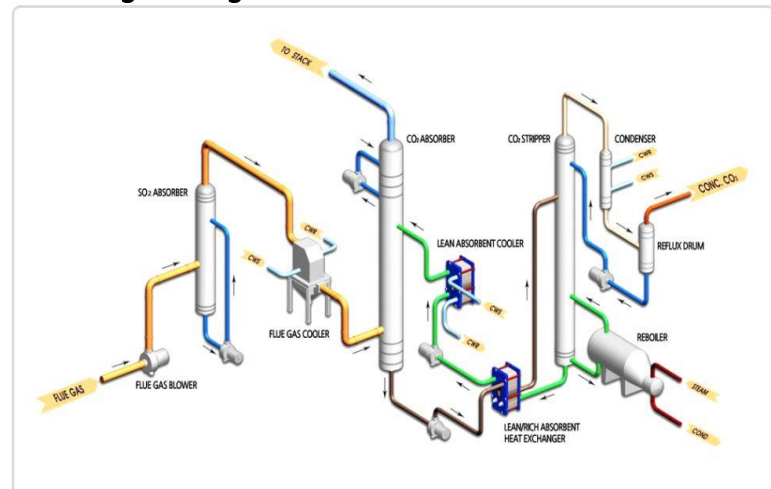
National Business

The only listed public-company specialized in engineering



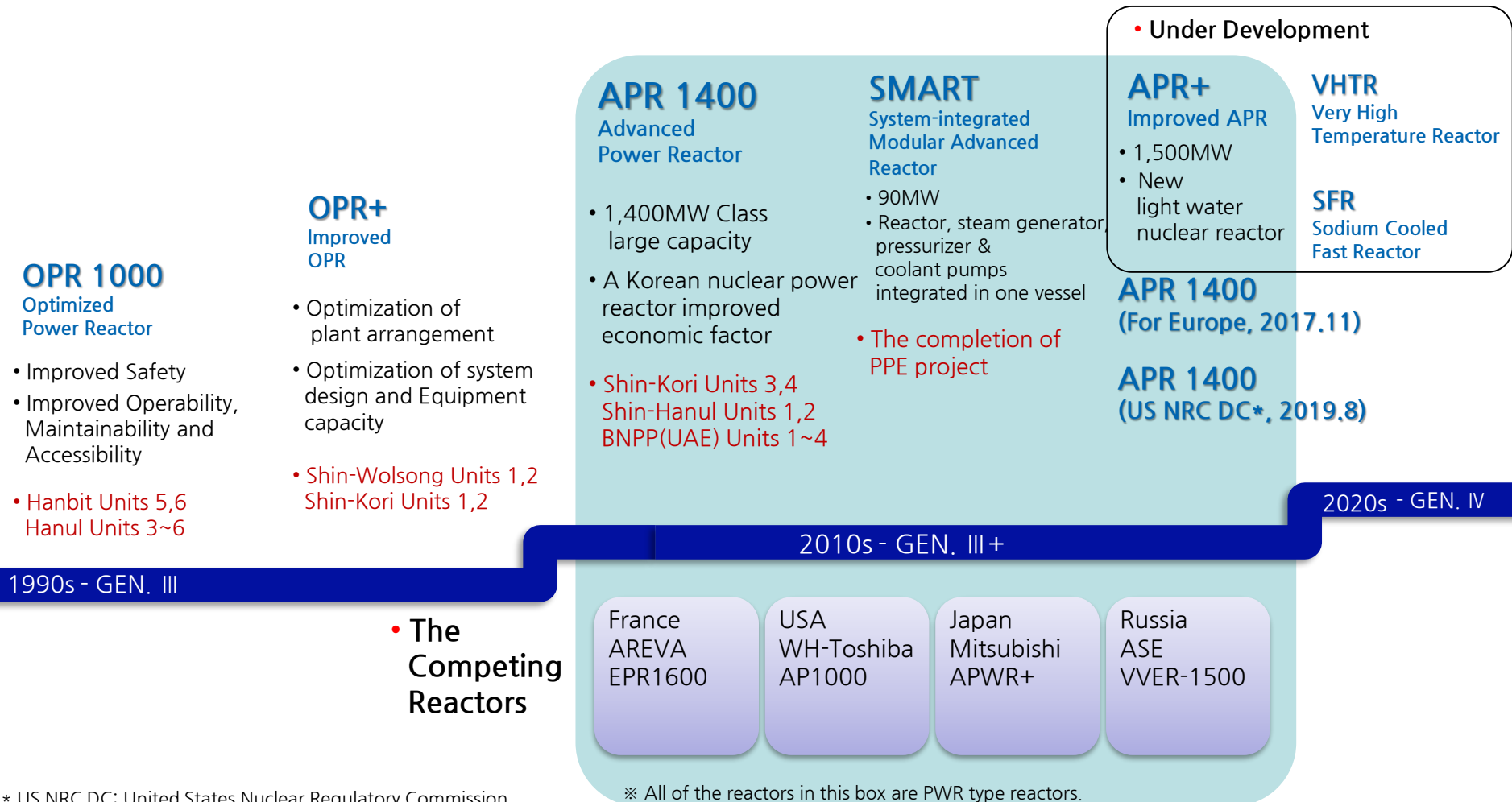
Leading the development of national technology

• CCS Engineering



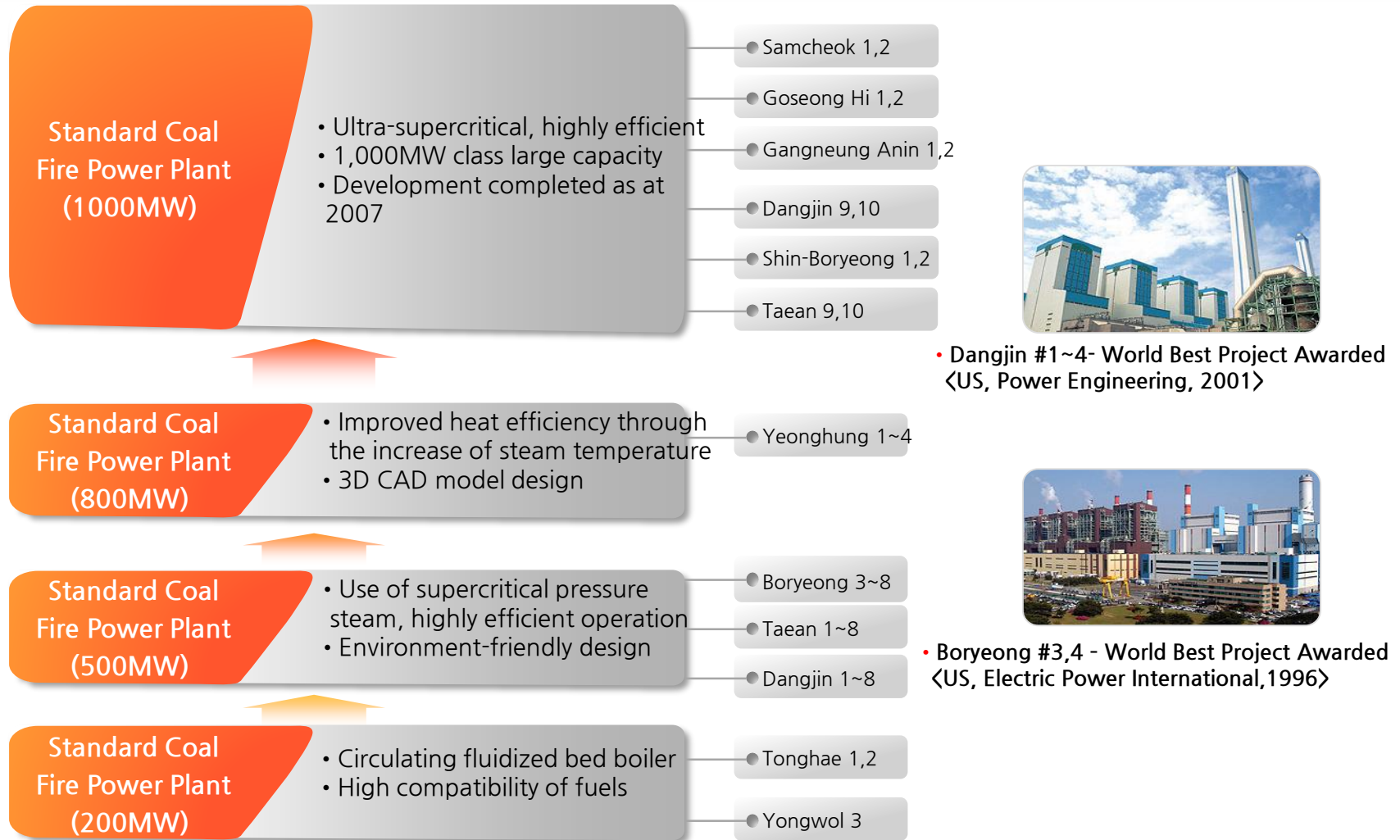
Technology - Nuclear Power Plant

Korean Nuclear Power Plant Design Development



Technology – Thermal Power Plant

Coal-Fired Power Plant Design Development



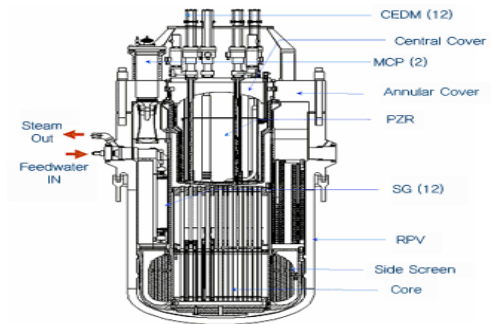
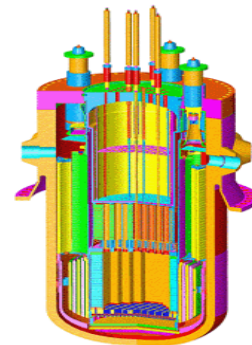
Focus on 10 core businesses in 5 areas



New Growth Businesses - SMART and ITER

• 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
- Year 2019 : Completion of PPE(Pre-Project Engineering) project



• 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 : 63.8 KRW bn. (expecting more orders)

New Growth Businesses - Decommissioning

Expanding businesses for post-management of the early nuclear power plants due to the upcoming closing

• Decommissioning

▫ The early nuclear power plants in Korea

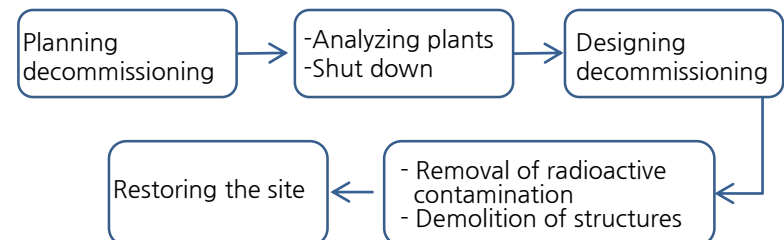
Plant	Commercial operation	Planned close	
KORI #1	1978	2017	license extended 2007 → 2017
Wolsung #1	1983	2018	license extended 2012 → 2018
KORI #2	1983	2023	
KORI #3	1985	2024	
KORI #4	1986	2025	

- 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



New Growth Businesses - Configuration Management

Application of Configuration Management

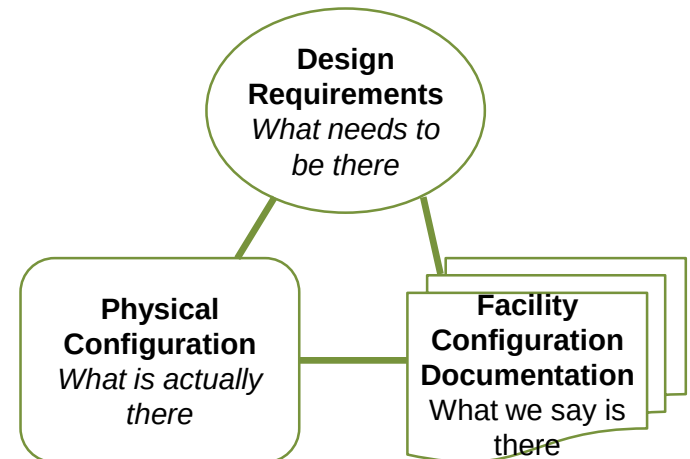
• Need of Configuration Management for prevention of critical accident

Situation	Purpose	Project
• 25~29% of accidents in nuclear plants relating with error of Configuration Management • Satisfaction of regulatory requirements	• IT-basis establishment of Configuration Management • Maintaining consistency between structure, systems and components • Assurance of that operational information consistent with design requirements is available	• Project : Establishment of system of Configuration Management for Shin-kori #5,6 • Contract Period : 2019.1 ~ 2023.10 • Contract Amount : KRW 27.1billion

• Definition

Configuration Management

Definition. The process of identifying and documenting the characteristics of a facility's structure, systems and components (SSCs) (including computer systems and software) and of ensuring that consistency is maintained between the design requirements, physical configuration, facility configuration and documentation.

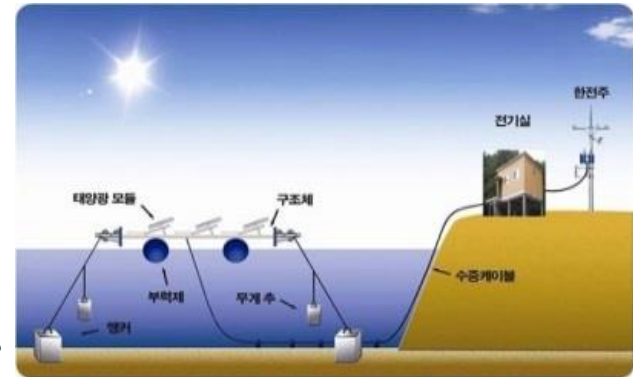


New Growth Businesses - New and Renewable Energy

Expanding the portion of new & renewable energy by the government's policy

The 3rd Energy Plan : Transition to Clean and Safe Energy Mix (2019.6)

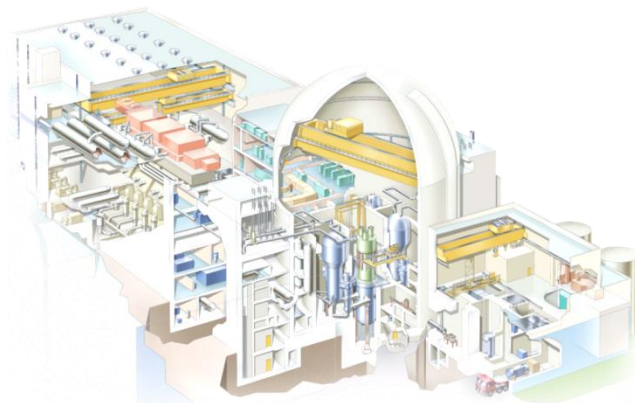
- Reducing the number of nuclear power plants and coal-fired power plants
- Expanding the portion of renewable energy to 30~35% (2040)
- Lowering the level of fine dust and performing the 2030 Road map to reduce the level of greenhouse gas



Developing and Performing Businesses for New & Renewable Energy

- Wind Power Plant : In Jeju Island,
Preparing the business
- Solar Power Plant : Research for development
of diverse solar-power module
- Other Businesses : Fuel cell, Biogas, Coal gasification, Energy Independent Island,
Zero energy building





200MW CFBC Power Plant Cutaway



Site plan key
 A. Boiler Building
 B. Turbine Building
 C. Control Building
 D. Auxiliary Boiler Building

E. Electrostatic Precipitator
 F. Stack
 G. 10 Fan
 H. Transformer

