



Investor Relations

Global Power EPC Company

CONTENTS

- 1 _ Company Information
- 2 _ Business Area
 - 2-1. Nuclear Power
 - 2-2. Thermal Power
 - 2-3. O&M/Environment/PM•CM
 - 2-4. New Biz. & New Tech.
- 3 _ Earnings

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



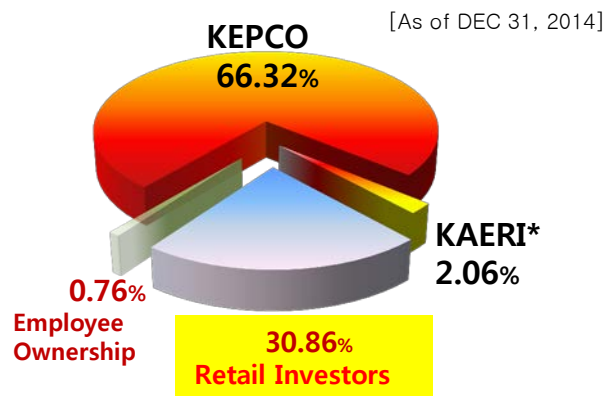
Korea's Leading Power Plant Engineering Company

- Korea's leading provider of design and engineering for nuclear, thermal and hydro-electric plants with over 38 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	Park, Koo Woun <ul style="list-style-type: none"> • Former nuclear power advisor, POSCO E&C • Former Senior Vice President, KEPCO E&C
Foundation Date	October 1, 1975
Employees	2,297 (As of DEC. 31, 2014)
Business Area	Power plant design & engineering, etc.

Ownership



IPO Information

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

Dividends

[Unit : KRW]

FY	2011	2012	2013	2014
Dividend Propensity*	70%	55%	45%	40%
Amount (per a share)	2,126	1,932	406	575

* KAERI - Korea Atomic Energy Research Institute

* 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

• Environmentally-friendly Biz.

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



• O&M (Operations & Maintenance)

- Technology & Engineering Support for Operating Power Plants

• PM/CM

- SOC
- Private SOC
- Power Plants
- International Plants

Business Area – Design & Engineering

All of the local nuclear power plants have been independently designed by KEPCO E&C since 1993, Hanul Unit 3.

Nuclear Power Plant

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



Major Project Experience

• Projects in Progress

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 '16	KHNP
	Shin-Kori #3,4	Aug '06 ~ May '16	KHNP
	APR1400 US NRC DC design/licensing support - Stage 2	Aug '14 ~ Oct '17	KHNP

• Projects Completed

Reactor	Project	First Power	Design
OPR 1000+	Shin-Wolsung #1,2	2012 / 2014	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
	Wolsung #3,4	1998 / 1999	AECL-KEPCOE&C
	Wolsung #2	1997	AECL-KEPCOE&C
	Wolsung #1	1983	AECL-CANATOM

*The Uljin was renamed Hanul

*KHNP – Korea Hydro & Nuclear Power co. LTD. (The sole nuclear power plant operator in Korea)

*WEC – WestingHouse Electric.

*AECL – Atomic Energy of Canada Limited

*CANDU PHWR – CANada Deuterium Uranium Pressurised Heavy Water Reactor

Technology – Nuclear Power Plant



Korean Nuclear Power Plant Design Development

OPR 1000
Optimized Power Reactor

- Improved Safety
- Improved Operability, Maintainability and Accessibility
- Hanbit Units 5,6
Hanul Units 3~6

OPR+
Improved OPR

- Optimization of plant arrangement
- Optimization of system design and Equipment capacity
- Shin-Wolsong Units 1,2
Shin-Kori Units 1,2

APR 1400
Advanced Power Reactor

- 1,400MW Class large capacity
- A Korean nuclear power reactor improved economic factor
- Shin-Kori Units 3,4
Shin-Hanul Units 1,2
BNPP(UAE) Units 1~4

Under Development

APR 1400 (For Europe)

APR+
Improved APR

- 1,500MW
- New light water nuclear reactor

APR 1400 (US NRC DC*)

SMART
System-integrated Modular Advanced Reactor

- 90MW
- Reactor, steam generator, pressurizer & coolant pumps integrated in one vessel

VHTR
Very High Temperature Reactor

SFR
Sodium Cooled Fast Reactor

1990s - GEN. III

• The Competing Reactors

2010s - GEN. III+

2020s - GEN. IV

France AREVA EPR1600	USA WH-Toshiba AP1000	Japan Mitsubishi APWR+	Russia ASE VVER-1500
----------------------------	-----------------------------	------------------------------	----------------------------

※ All of the reactors in this box are PWR type reactors.

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

Strength of Korean Nuclear Power Plants

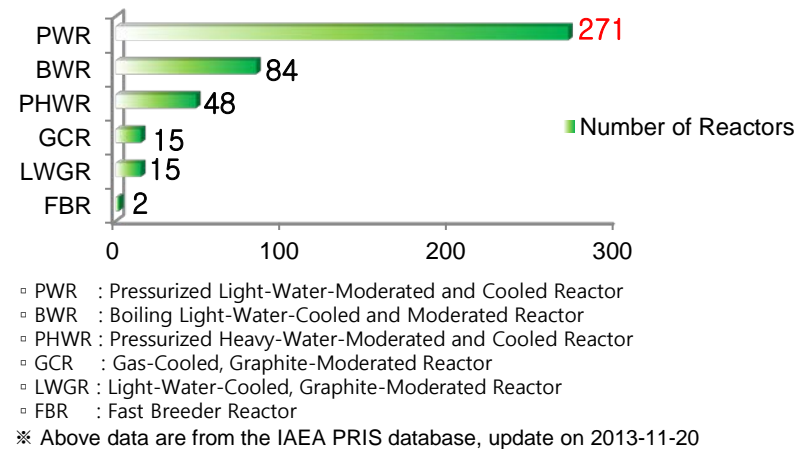


APR1400 - The best reliability, economic efficiency and operability

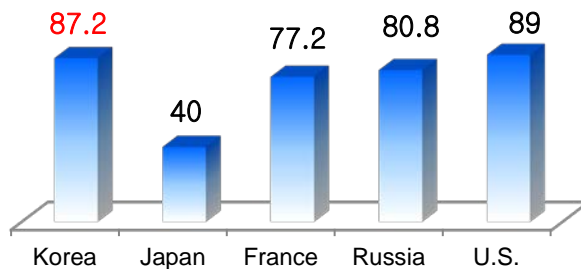
Comparison with other reactors (※ www.apr1400.com)

	APR1400	AP1000	EPR	ABWR
Developer	KHNP	WH/ Mitsubishi	Framatome ANP	Hitachi/ Toshiba/ GE
Power Capacity (MWe)	1,400	1,100	1,600 – 1,700	1,300
Design Life (Year)	60	60	60	60
Construction Period (month)	48	36	57	48
Refueling Time (month)	18	18~24	18	18~24
Reactor Type	PWR	PWR	PWR	BWR

Operational Reactors by type in the world



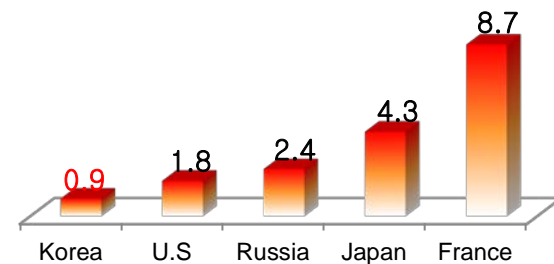
Energy Availability Factor(%)



▪ EAF = (REG-PEL-UEL-XEL)/REG x100
 ▫ REG : Reference Energy Generation ▫ PEL : Planned Energy Loss
 ▫ UEL : Unplanned Energy Loss ▫ XEL : External Energy Loss

※ IAEA PRIS (Power Reactor Information System), A three-year average (2010~2012)

Unplanned Capacity Loss Factor(%)



※ IAEA PRIS (Power Reactor Information System), A three-year average (2010~2012)

Market Opportunities

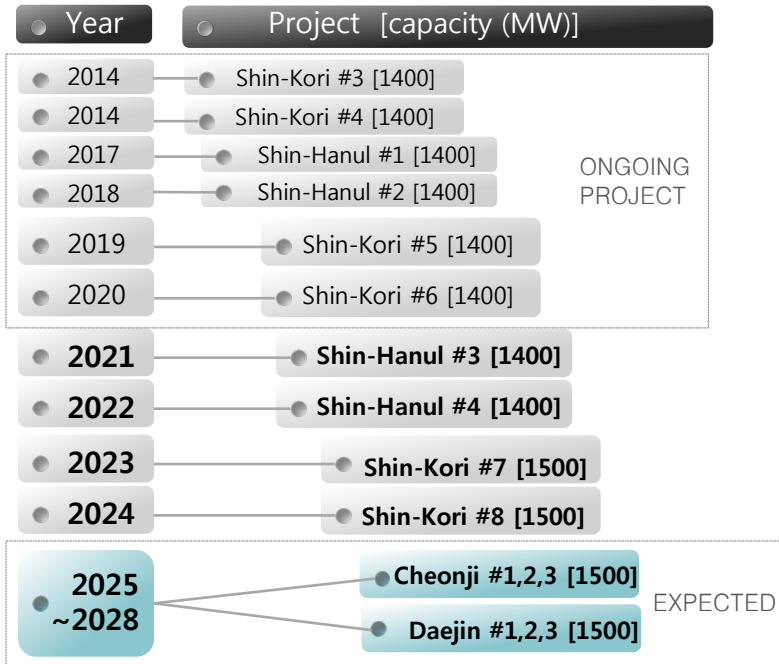


Focus on New Opportunities at Home & Abroad

Growth of Nuclear Power

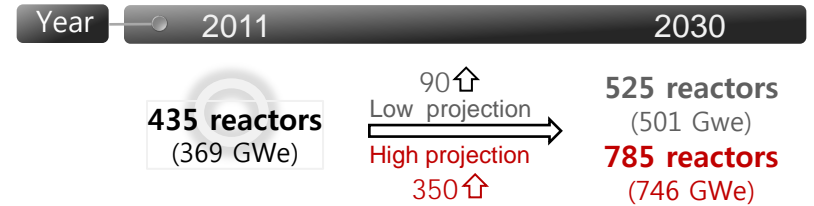
• Domestic

*Timeline for Completion of Nuclear power plant construction ('13~'24)

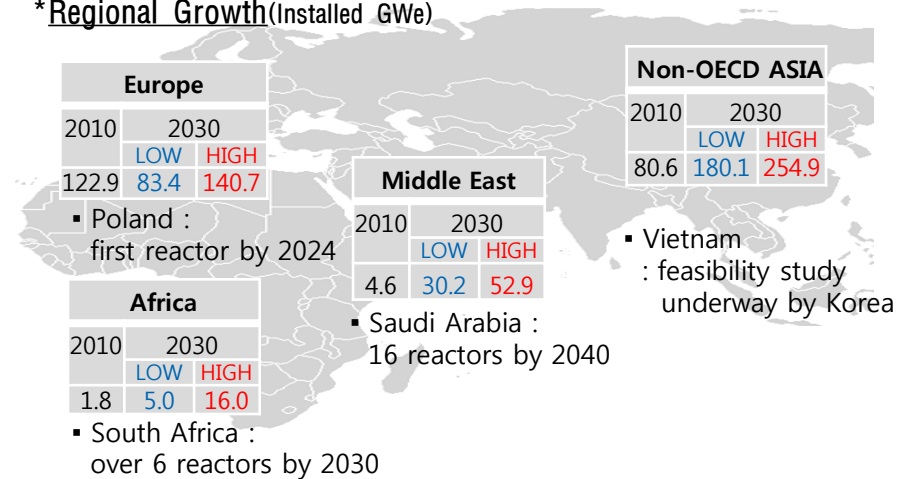


• Overseas

*Projected Growth for World Nuclear Power



*Regional Growth(Installed GWe)



*This timeline is based on "The 6th Basic Plan of Long-term Electricity Supply" of The Ministry of Knowledge Economy, Feb, 2013

(Source : IAEA Nuclear Technology Review 2012 , World Nuclear Association country briefings)

Business Area – Design & Engineering

Experiences of Coal fired/ CFBC Coal fired/ Combined Cycle/ Cogeneration Design

Thermal Power Plant

Services performed

- Feasibility studies, environmental impact assessments, site survey
- Design standardization, basic and detail design of construction work
- Support for the purchase of equipment and materials
- Project management, supervision, test operation
- Quality assurance and control support
- Preparation, review and approval of documentation



Major Project Experience

• Projects in Progress

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
400	Osan cogeneration EPC	Apr '13 ~ Mar '16	DS Power
540	Cote d'Ivoire IV CCPP Add-on EPC	Jul '13 ~ Dec '15	CIPREL
1000x2	Taeon #9,10	Jun '11 ~ Mar '17	Korea Western Power
150 x3	Turkey Turfanbeyli EP	Apr '11 ~ Feb '15	SK E&C
1000x2	Shin-Boryeong #1,2	Jan '11 ~ Sep '17	Korea Midland Power
1000x2	Dangjin #9,10	Oct '07 ~ Sep '16	Korea East-West Power
1000x2	Samchok #1,2	Sep '09 ~ Mar '16	Korea Southern Power
300	Taeon *IGCC Pilot Plant	Apr '11 ~ Jul '16	Korea Western Power

• Projects Completed

■ Coal Fired Power Plant

- 500MW 34 Units
- 800MW 4 Units

■ Large Scale *CFB Coal Fired Power Plant

- 200MW 2 Units
- 340MW 1 Unit

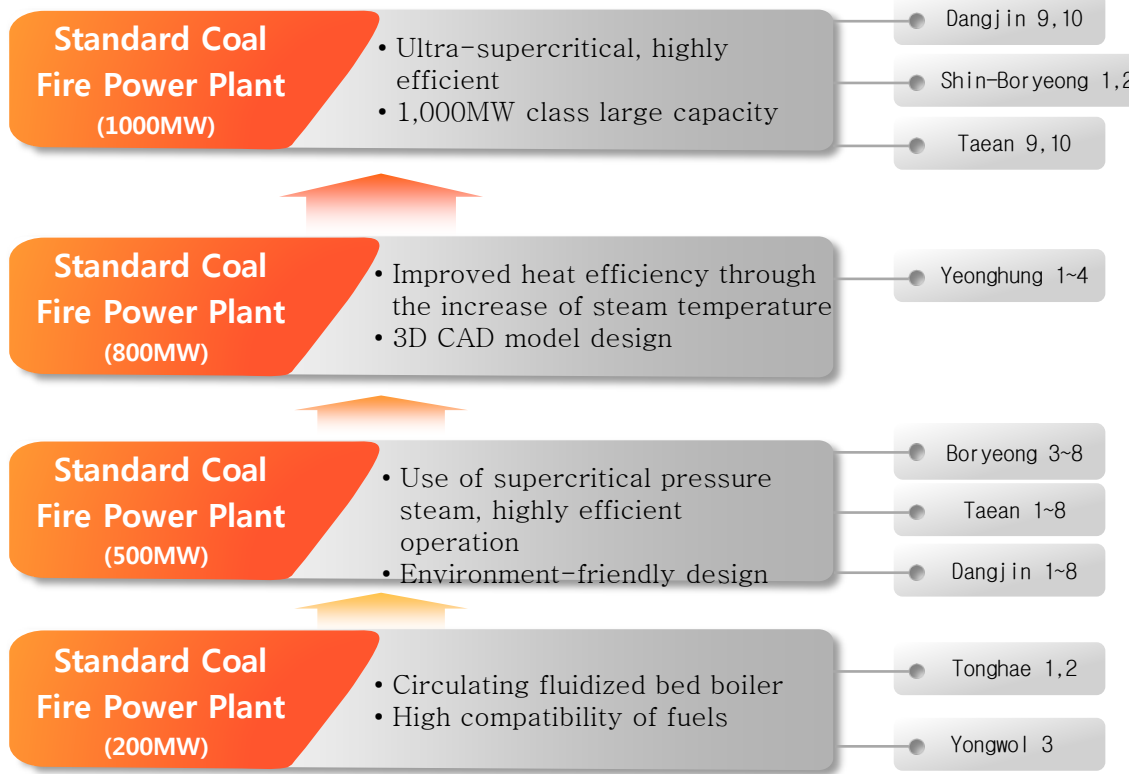
■ Combined Cycle /Cogeneration ▪ 38 Units

*IGCC - Integrated Gasification Combined Cycle
(Producing electricity by burning coal gas regarded as clean as natural gas)

* CFB - Circulating Fluidized Bed Combustion Boiler

Technology – Thermal Power Plant

Coal-Fired Power Plant Design Development



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

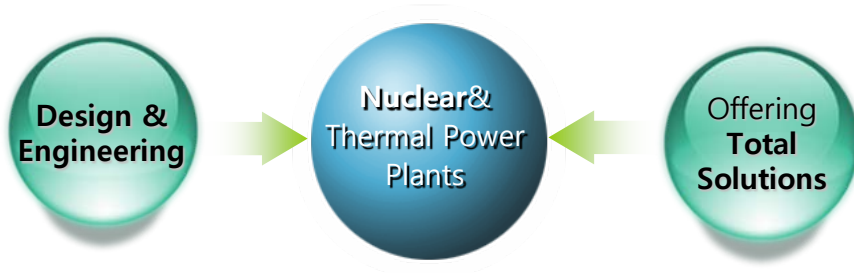


• **Boryeong #3,4 – World Best Project Awarded**
 <US, Electric Power International, 1996>

Business Area – O&M

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

O&M (Operations & Maintenance)



Key Business Areas

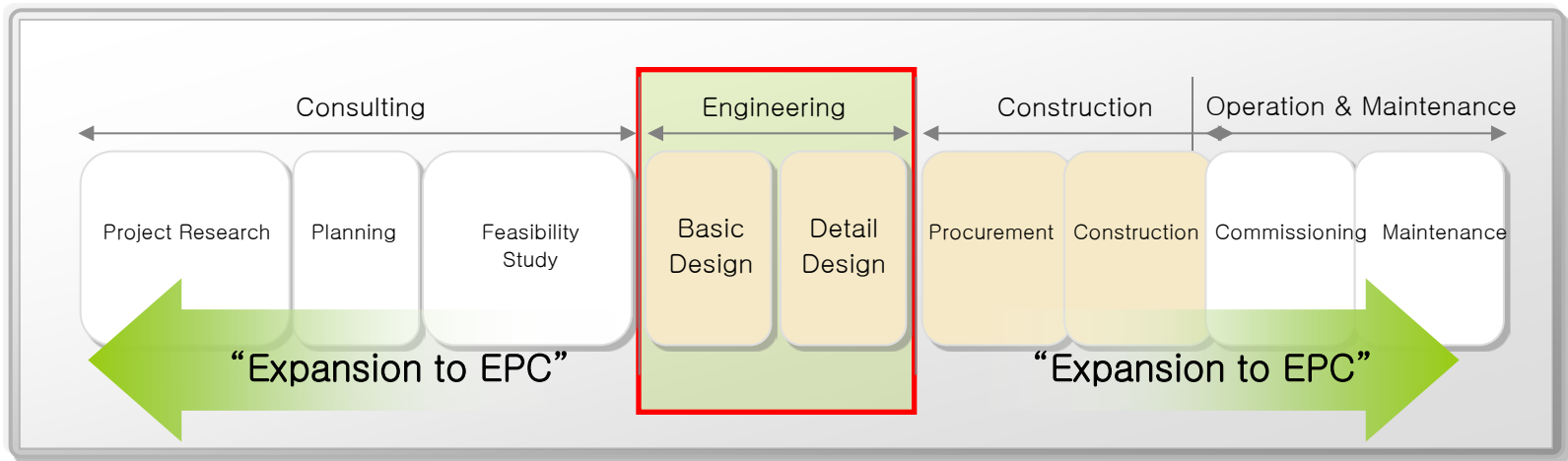
- Replacement design of key equipment
- Increase the output of power plants
- Design facility improvement of power plants in operation
- Performance of operating nuclear power plants, inspection, preventative maintenance, and technical support for drivability enhancement
- Technical support for safety promotion of operating nuclear power plants
- Technical support for license application and new regulatory requirements

Domestic Operating Nuclear Power Plants(23 Units)




Business Area – PM/CM

Management of the Entire or Parts of a Construction Project
(Consulting, Engineering, Construction, O&M , etc.)



• Involved Projects

SOC		POWER PLANTS		PRIVATE SOC	
					
KTX Project	Incheon Int'l Airport	Nuclear	Thermal	Incheon Int'l Airport Rail	Bridge of Busan-Gejei

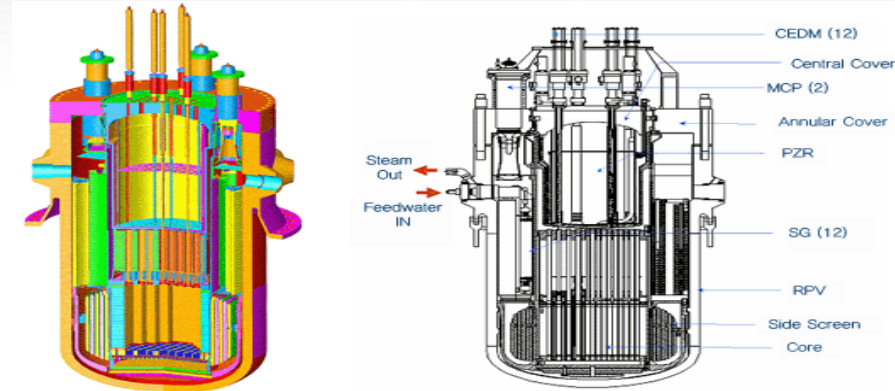
SMART & Decommissioning



SMART(System-integrated Modular Advanced Reactor)

- **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



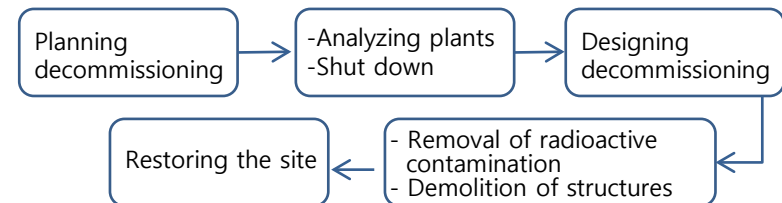
Decommissioning

- **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.

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	

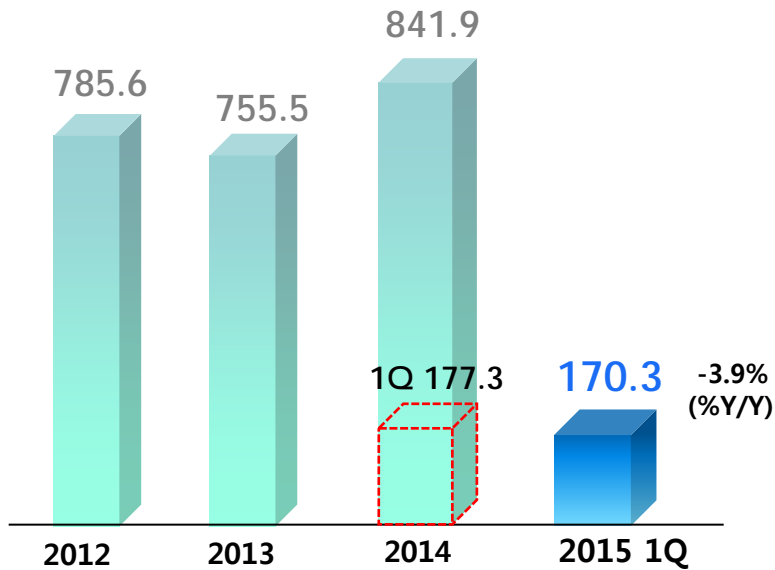
- **Decommissioning Flow**



2015 1Q Revenue

• Revenue

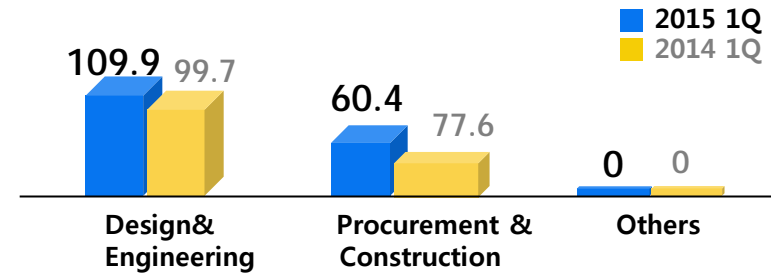
[Unit: KRW bn.]



• Revenue Breakdown

■ By Business Area

[Unit: KRW bn.]



■ By Division

[Unit: KRW bn.]

	Nuclear	Thermal	Others
2015 1Q	74.0 (43.5%)	95.4 (56.0%)	0.9 (0.5%)
2014 1Q	75.7 (42.7%)	97.3 (54.9%)	4.3 (2.4%)

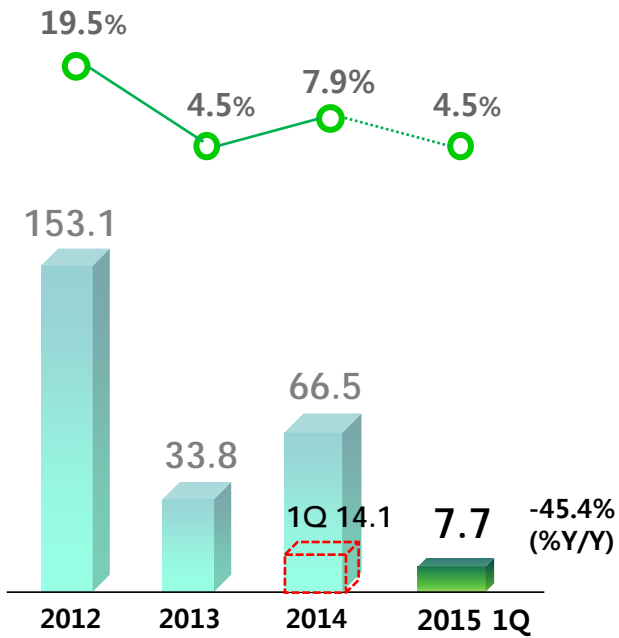
■ By Region



2015 1Q Financial Highlights

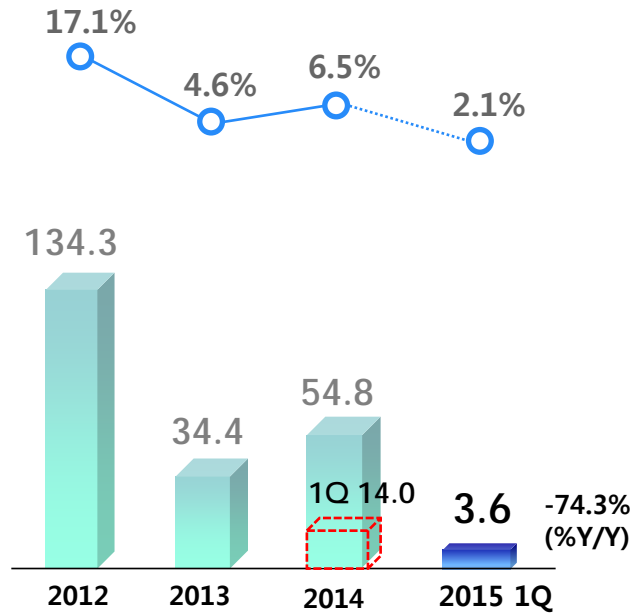
• Operating Income /Margin

[Unit : KRW bn.]



• Net Income /Margin

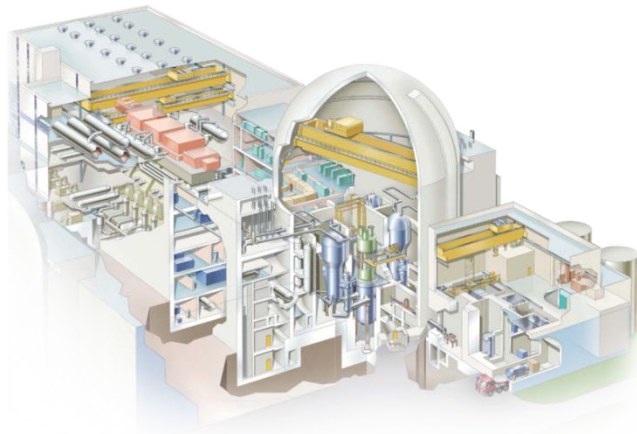
[Unit : KRW bn.]



• Quarterly Overview

[Unit : KRW bn.]

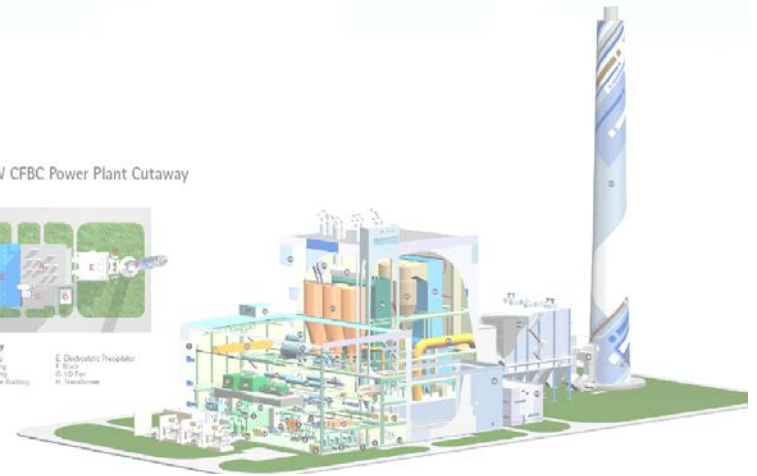
	2015 1Q	2014 4Q	2014 1Q
Revenue (%Q/Q)	170.3 (-34.4%)	259.7	177.3
Operating Income (%Q/Q)	7.7 (-26.7%)	10.5	14.1
Net Income (%Q/Q)	3.6 (-61.3%)	9.3	14.0



200MW CFBC Power Plant Cutaway



- Site plan key
- A. Boiler Building
 - B. Turbine Building
 - C. Control Building
 - D. Auxiliary Nucleon Building
 - E. Desulphurization Precipitator
 - F. Stack
 - G. 150 Feet
 - H. Transformer



2354 Yonggudaero, Giheung-gu, Yongin-si
 Gyeonggi-do, South Korea 446-713
 Email : yeop8@kepco-enc.com
<http://www.kepco-enc.com>

