



Investor Relations

Global Power EPC Company

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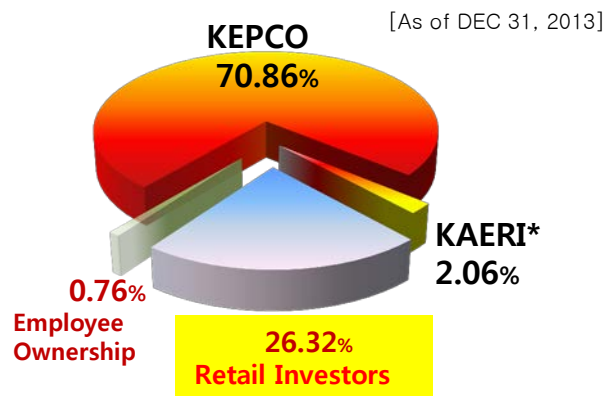
Korea's Leading Power Plant Engineering Company

- 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	2,326 (As of SEP. 30, 2013)
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	2010	2011	2012	2013
Dividend Propensity*	50%	70%	55%	45%
Amount (per a share)	1,847	2,126	1,932	406

* KAERI - Korea Atomic Energy Research Institute

* Dividend Propensity – Dividend/Net Income *100



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
	Shin-Kori #5,6	Apr '14 ~ Mar '22	KHNP
APR 1400	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

• 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
	Hanul #5,6	2004 / 2005	KEPCOE&C
OPR 1000	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
CANDU PHWR	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.

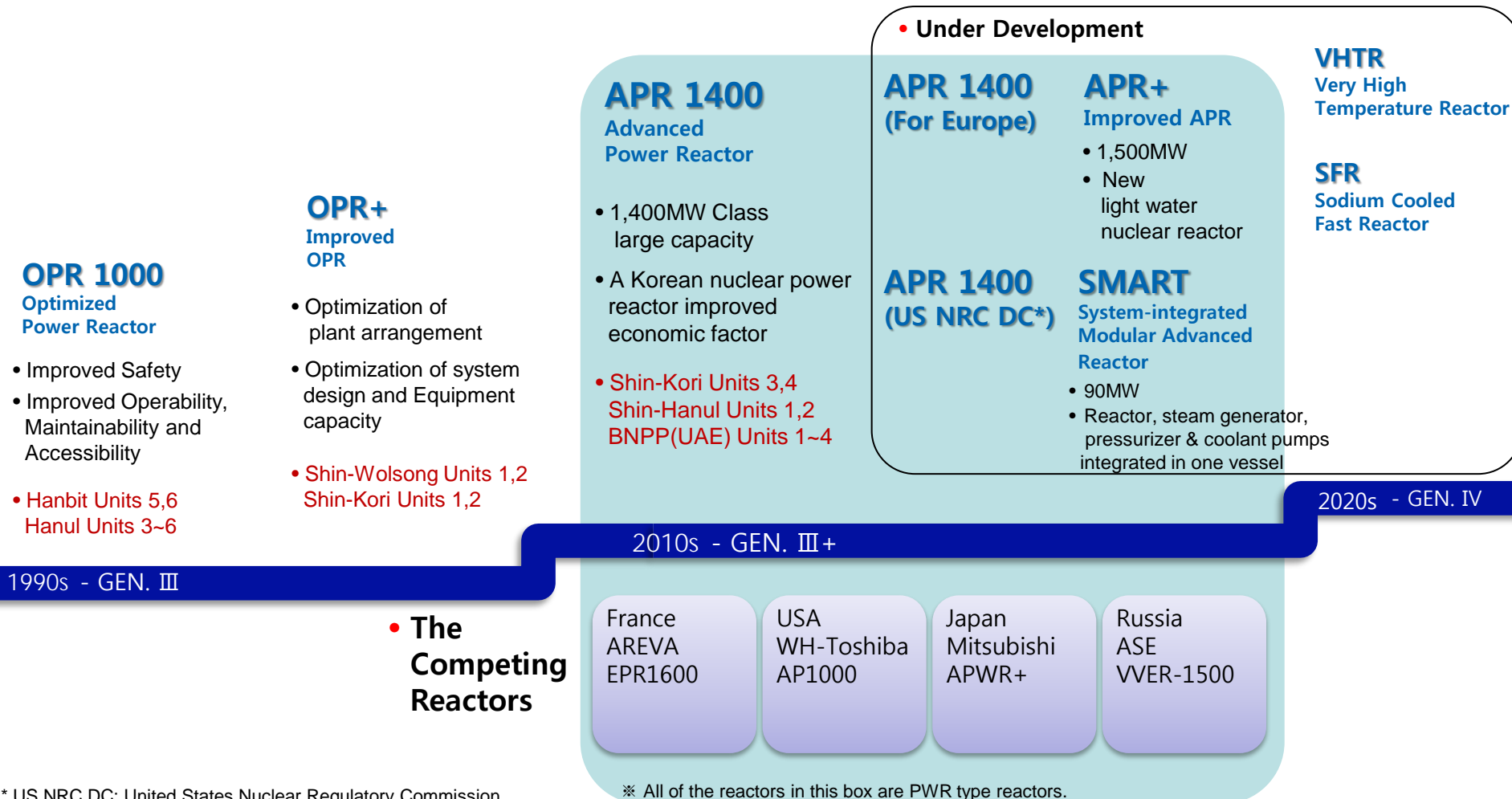
*AECL – Atomic Energy of Canada Limited

*CANDU PHWR – CANada Deuterium Uranium Pressurised Heavy Water Reactor

Technology – Nuclear Power Plant



Korean Nuclear Power Plant Design Development



Strength of Korean Nuclear Power Plants

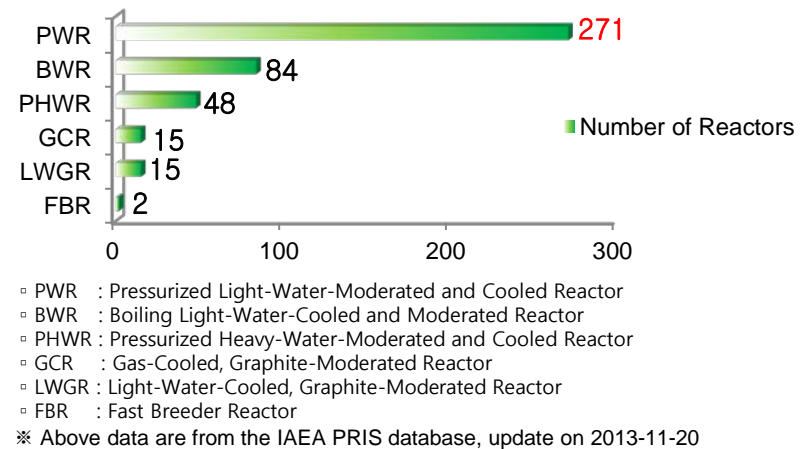


APR1400 - The best reliability, economic efficiency and operability

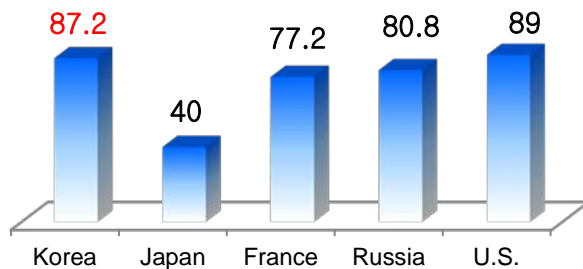
Comparison with other reactors (※ www.apr1400.com)

	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



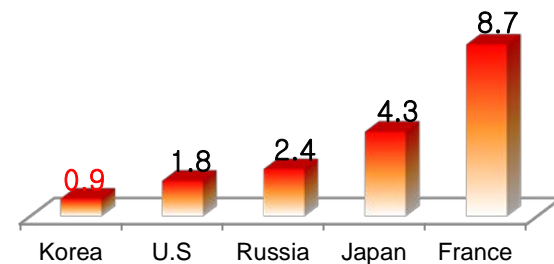
Energy Availability Factor(%)



■ 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

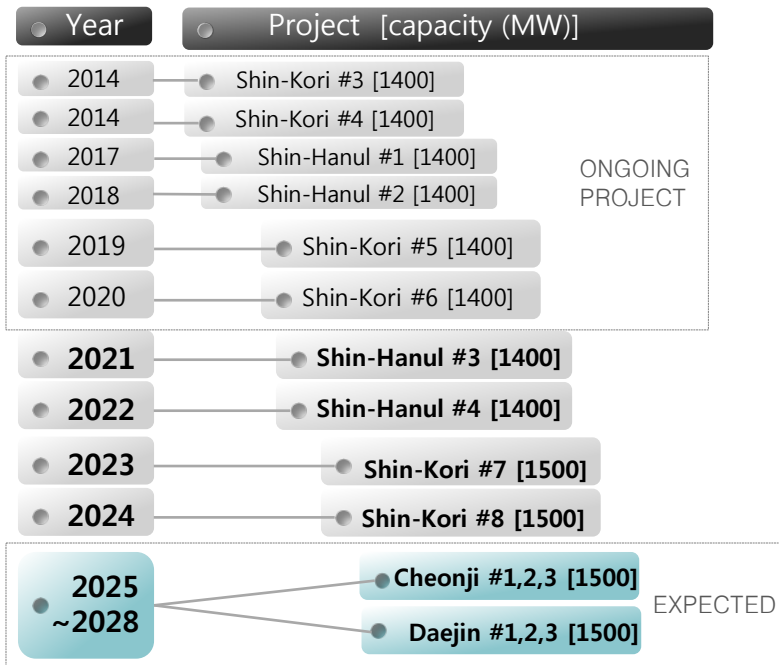


Focus on New Opportunities at Home & Abroad

Growth of Nuclear Power

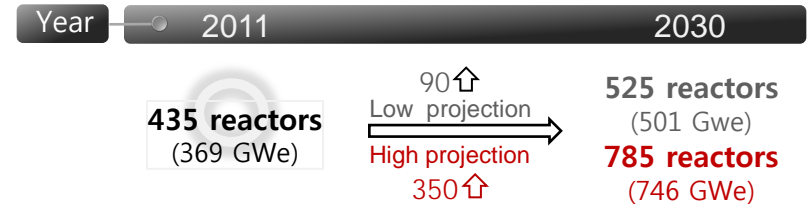
• Domestic

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

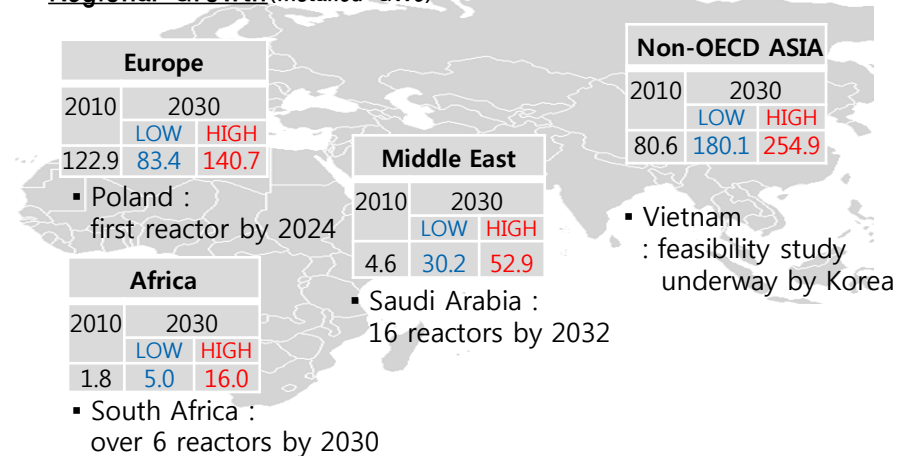


• Overseas

*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
340	Ghana Takoradi T2 EPC	Dec '11 ~ Oct '14	Takoradi Int'l Company
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
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

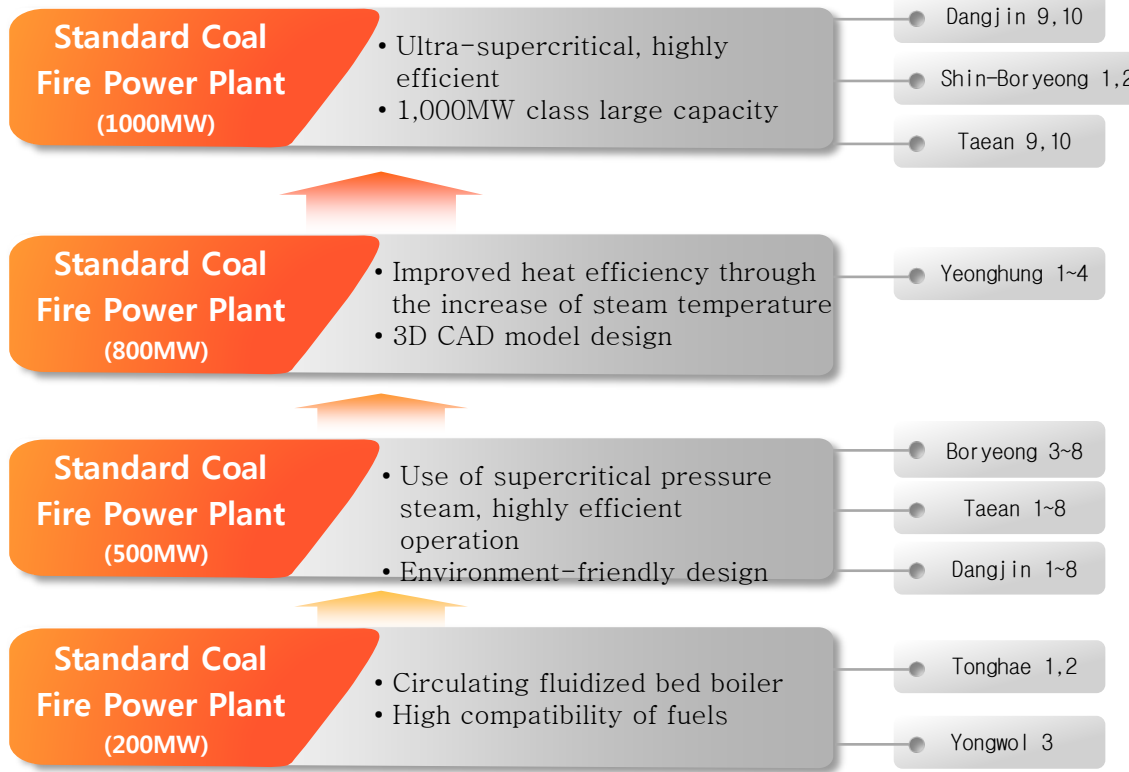
■ Combined Cycle /Cogeneration ▪ 38 Units

*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 (Operation & Maintenance)

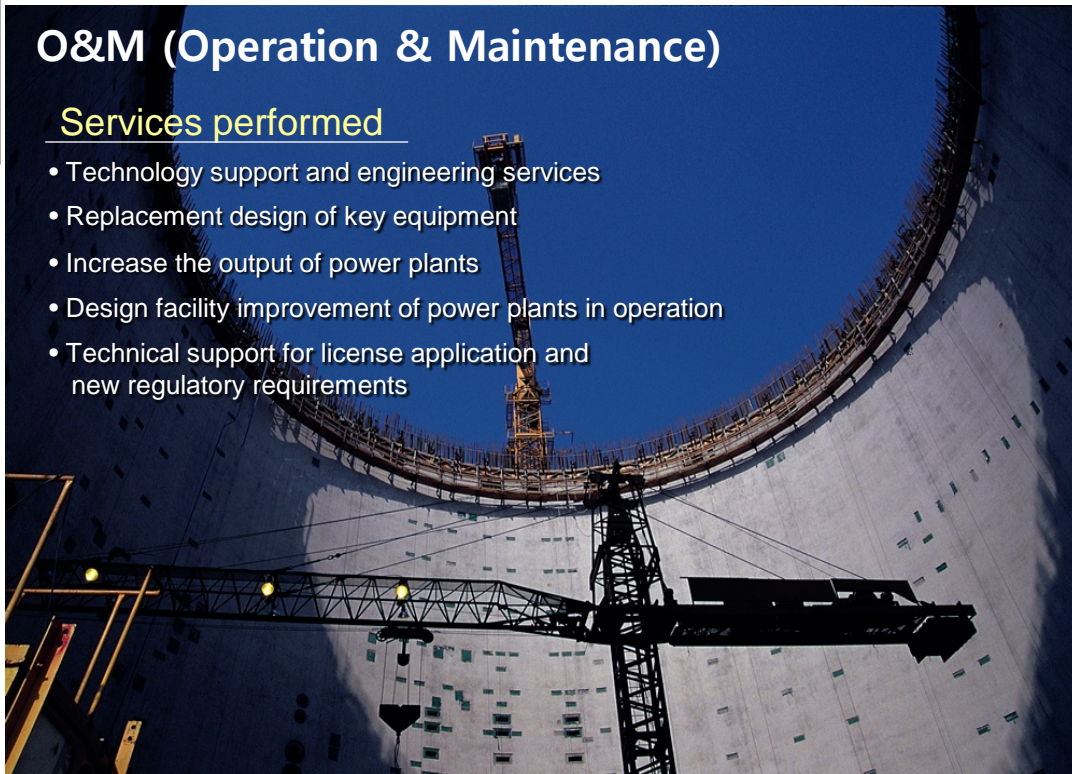
Services performed

- 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

Major Project Experience

• Recent Projects

- Technical support for license application to replace the steam generator for Hanul #1,2
- Technical consulting for license application to increase the output for Hanul #1,2
- Improvement of facilities at Yeosu #2
- hundreds of small projects are in progress



Business Area – O&M

The O&M market is growing
due to the old operating nuclear power plants.

• Domestic Operating Nuclear Power Plants (23 units)

Plant		Capacity (MW)	Commercial Date	NSSS Supplier	Plant A/E	Model
Kori	#1,2	587/650	Apr `78/ Jul `83	WEC	Gilbert	PWR
	#3,4	950	Sep `85 / Apr `85	WEC	Bechtel/KEPCO E&C	
Wolsung	#1,2	679 /700	Apr `83 / Jul `98	AECL/	AECL	PHWR
	#3,4	700	Jul `98 / Oct `99	AECL/DOOSAN	AECL/KEPCO E&C	
Hanbit	#1,2	950	Aug `86 / Jun `87	WEC	Bechtel/KEPCO E&C	PWR (OPR1000)
	#3,4	1,000	Mar `95 / Jan `96	DOOSAN	KEPCO E&C	
	#5,6	1,000	May `02 / Dec `02	DOOSAN	KEPCO E&C	
Hanul	#1,2	950	Sep `89 / Sep `88	Framatome	Framatome	PWR (OPR1000)
	#3,4	1,000	Aug `98 / Dec `99	DOOSAN	KEPCO E&C	
	#5,6	1,000	Jul `04 / Apr `05	DOOSAN	KEPCO E&C	
Shin-Kori	#1,2	1,000	Feb `11 / Jul `12	DOOSAN	KEPCO E&C	PWR (OPR1000+)
Shin-Wolsung	#1,2	1,000	Jul `12	DOOSAN	KEPCO E&C	



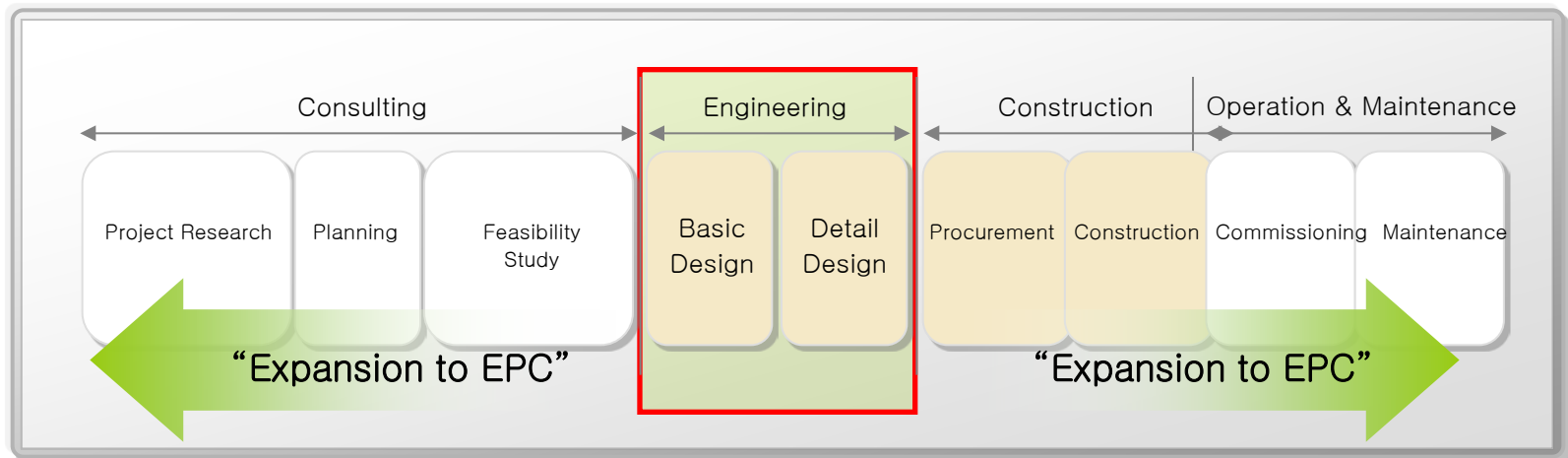
• Developing Canada PHWR O&M Market

- MOU with SNC-Lavalin Nuclear (Mar `12)
- MOU with CANDU Energy (May `12)
- Established the Office in Toronto, Canada (Dec `12)


- * CANDU Energy
 - created in 2011 when parent company SNC-Lavalin purchased the commercial reactor division of AECL(Atomic Energy of Canada Limited), along with CANDU reactor technology
- * CANDU reactor
 - CANada Deuterium Uranium PHWR(Pressurised Heavy Water Reactor)

Business Area – PM/CM

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



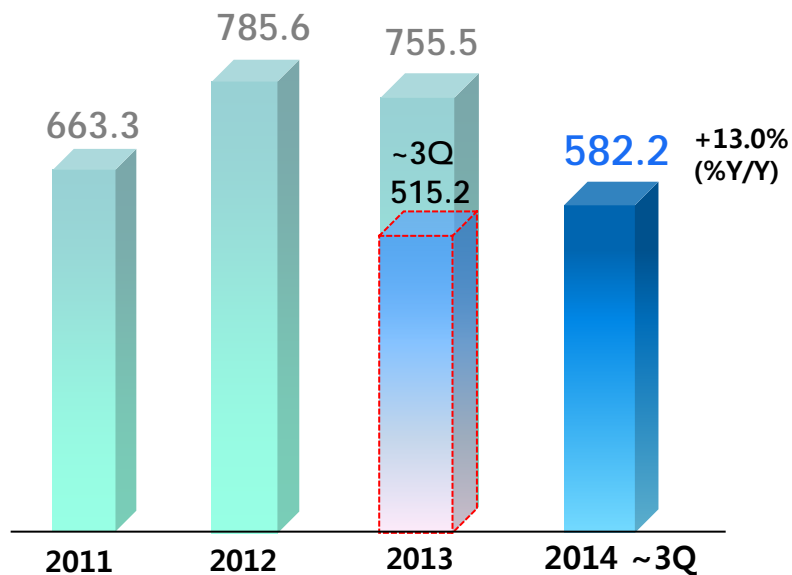
• Involved Projects

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

3Q 2014 (Jan ~ Sep 2014)

• Revenue

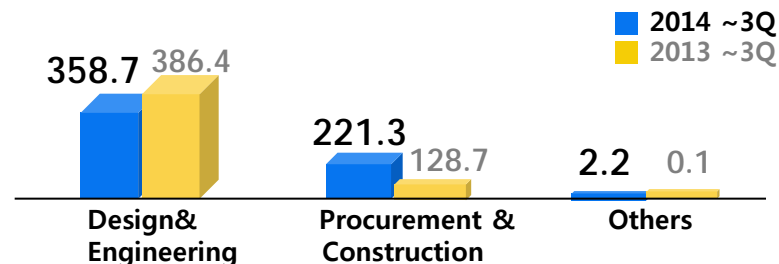
[Unit: KRW bn.]



• Revenue Breakdown

■ By Business Area

[Unit: KRW bn.]



■ By Division

[Unit: KRW bn.]

	Nuclear	Thermal	Others
2014 ~3Q	274.7 (47.2%)	289.7 (49.7%)	17.8 (3.1%)
2013 ~3Q	272.1 (52.8%)	227.2 (44.1%)	15.9 (3.1%)

■ By Region

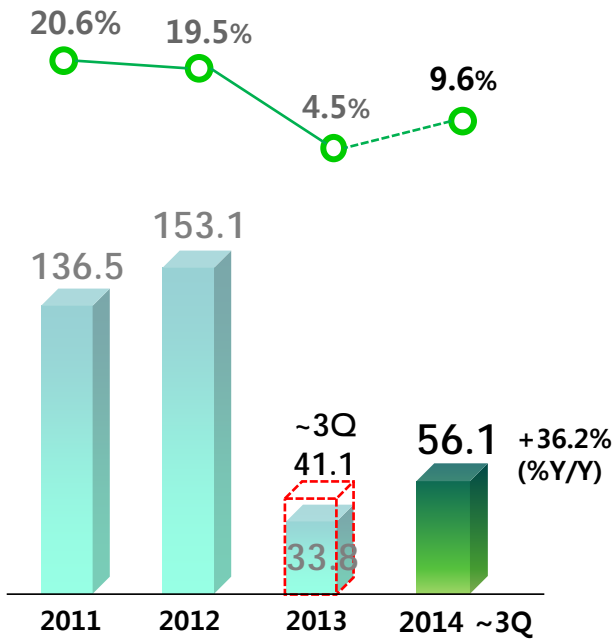
overseas

43% (252.4 KRW bn.)

3Q 2014 (Jan ~ Sep 2014)

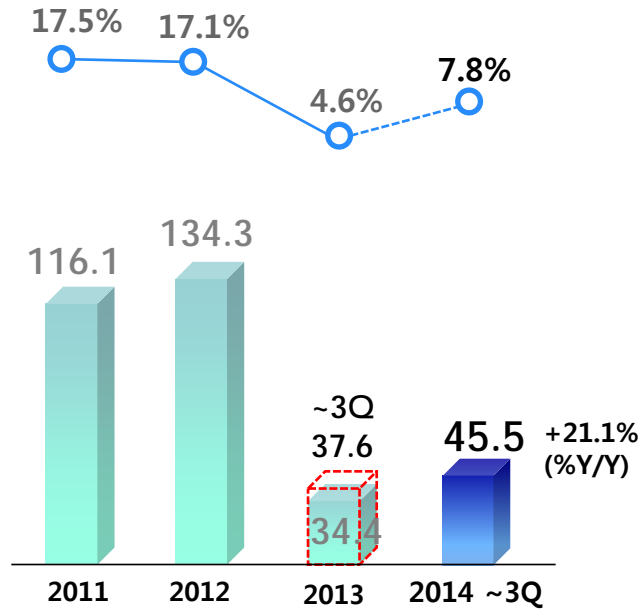
• Operating Income /Margin

[Unit : KRW bn.]



• Net Income /Margin

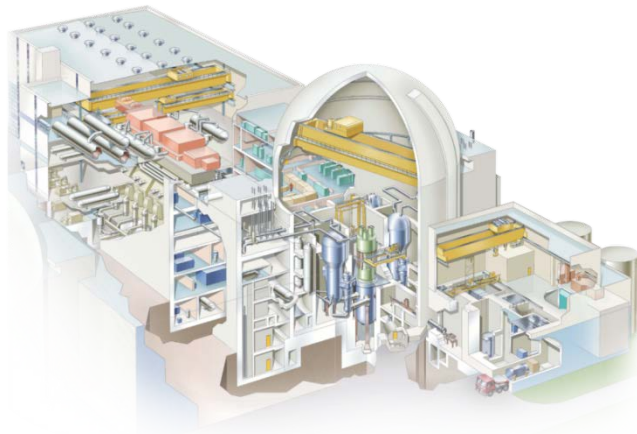
[Unit : KRW bn.]



• Quarterly Overview

[Unit : KRW bn.]

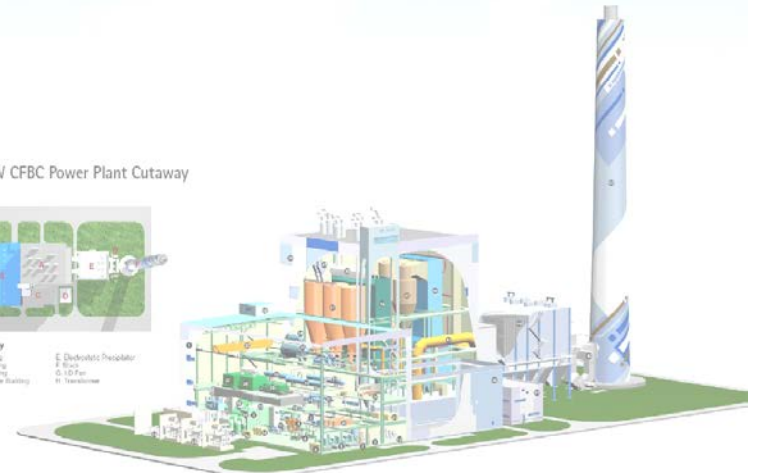
	2014 3Q	2014 2Q	2013 3Q
Revenue (%Q/Q)	193.0 (-9.0)	212.0	161.6
Operating Income (%Q/Q)	11.7 (-61.6)	30.3	3.0
Net Income (%Q/Q)	8.5 (-63.2)	23.1	1.3



200MW CFBC Power Plant Cutaway



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



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