Investor Relations

Global Power EPC Company

CONTENTS

KEPCO ENGINEERING & CONSTRUCTION COMPANY, INC.

Company Overview

Korea's Leading Power Plant Engineering Company

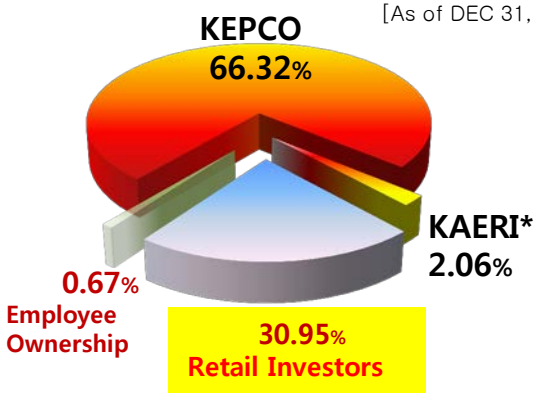
- Korea's leading provider of design and engineering for nuclear, thermal and hydro-electric plants with over 38 years of experience
- Current 100% market share in nuclear power plant design in Korea
- The world's most competitive engineering company specialized in the two sectors: A/E and NSSS
- Expanding its business to Thermal EPC, energy-related business, environment-friendly business, etc.

Corporate Information

CEO & President	Park, Koo Woun • 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

[As of DEC 31, 2014]



* 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	2010	2011	2012	2013
Dividend Propensity*	50%	70%	55%	45%
Amount (per a share)	1,847	2,126	1,932	406

* 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

• Environmentally-friendly Biz.

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

• 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.

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
CANDU PHWR	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

1990s - GEN. Ⅲ

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

2010s - GEN. Ⅲ+

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

2020s - GEN. IV

- **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

- **The Competing Reactors**

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

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

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

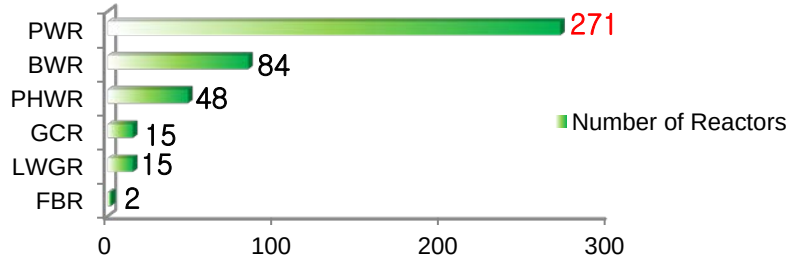
Strength of Korean Nuclear Power Plants

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

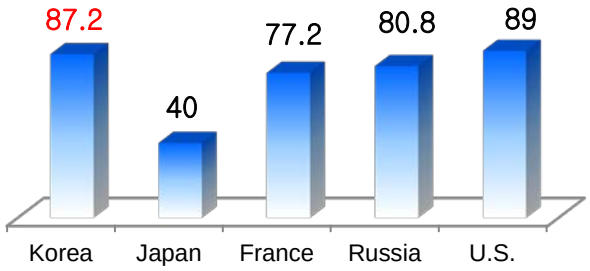
Operational Reactors by type in the world



- PWR : Pressurized Light-Water-Moderated and Cooled Reactor
- BWR : Boiling Light-Water-Cooled and Moderated Reactor
- PHWR : Pressurized Heavy-Water-Moderated and Cooled Reactor
- GCR : Gas-Cooled, Graphite-Moderated Reactor
- LWGR : Light-Water-Cooled, Graphite-Moderated Reactor
- FBR : Fast Breeder Reactor

※ Above data are from the IAEA PRIS database, update on 2013-11-20

Energy Availability Factor(%)

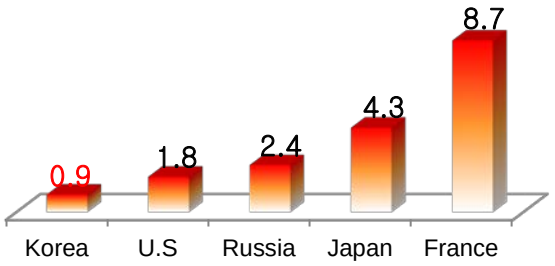


▪ EAF = (REG-PEL-UEL-XEL)/REG x100

- 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)

Year	Project [capacity (MW)]	
2014	Shin-Kori #3 [1400]	ONGOING PROJECT
2014	Shin-Kori #4 [1400]	
2017	Shin-Hanul #1 [1400]	
2018	Shin-Hanul #2 [1400]	
2019	Shin-Kori #5 [1400]	
2020	Shin-Kori #6 [1400]	
2021	**Shin-Hanul #3 [1400]**	
2022	**Shin-Hanul #4 [1400]**	
2023	**Shin-Kori #7 [1500]**	
2024	**Shin-Kori #8 [1500]**	
2025 ~2028	**Cheonji #1,2,3 [1500]**	EXPECTED
	Daejin #1,2,3 [1500]	

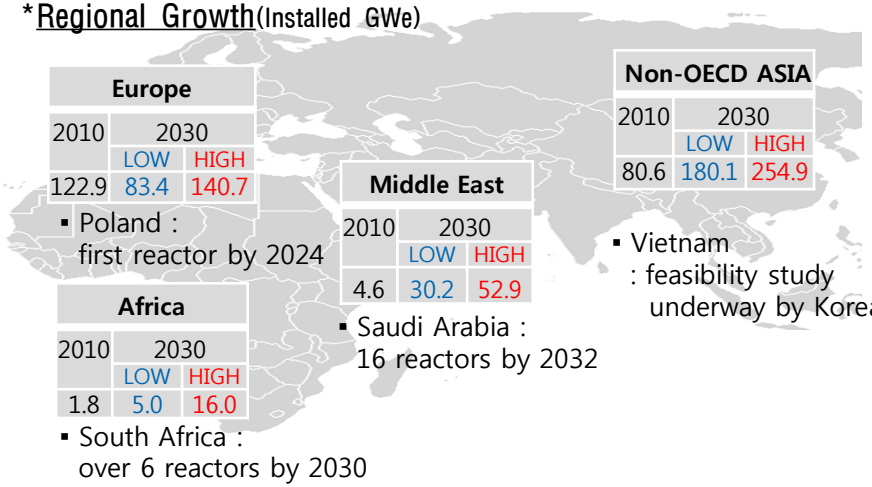
*This timeline is based on "The 6th Basic Plan of Long-term Electricity Supply" of The Ministry of Knowledge Economy, Feb, 2013

• Overseas

*Projected Growth for World Nuclear Power

Year	2011	2030
	435 reactors (369 GWe)	90↑ Low projection → **525 reactors** (501 Gwe)
		High projection 350↑ → **785 reactors** (746 GWe)

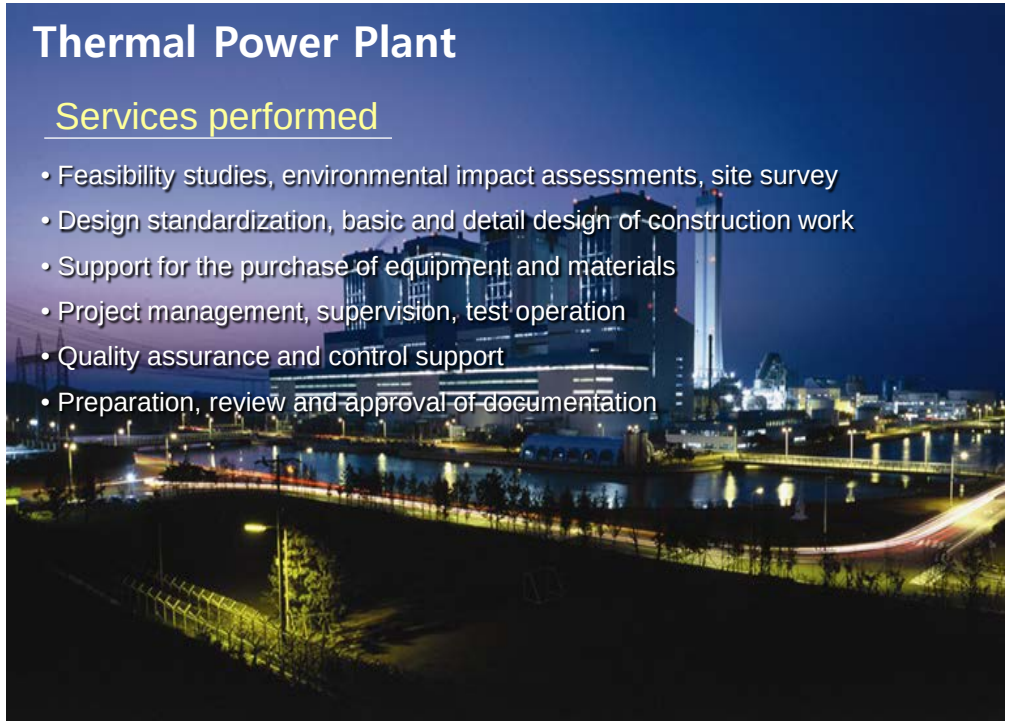
*Regional Growth(Installed GWe)



(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



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	Taean #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	Taean *IGCC Pilot Plant	Apr '11 ~ Jul '16	Korea Western Power

*IGCC - Integrated Gasification Combined Cycle
(Producing electricity by burning coal gas regarded as clean as natural gas)
* CFB - Circulating Fluidized Bed Combustion Boiler

• 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

Technology – Thermal Power Plant

Coal-Fired Power Plant Design Development

Standard Coal Fire Power Plant (1000MW)
- Ultra-supercritical, highly efficient
- 1,000MW class large capacity

Dangjin 9,10
Shin-Boryeong 1,2
Taean 9,10

Standard Coal Fire Power Plant (800MW)
- Improved heat efficiency through the increase of steam temperature
- 3D CAD model design

Yeonghung 1~4

Standard Coal Fire Power Plant (500MW)
- Use of supercritical pressure steam, highly efficient operation
- Environment-friendly design

Boryeong 3~8
Taean 1~8
Dangjin 1~8

Standard Coal Fire Power Plant (200MW)
- Circulating fluidized bed boiler
- High compatibility of fuels

Tonghae 1,2
Yongwol 3

• **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

Major Project Experience

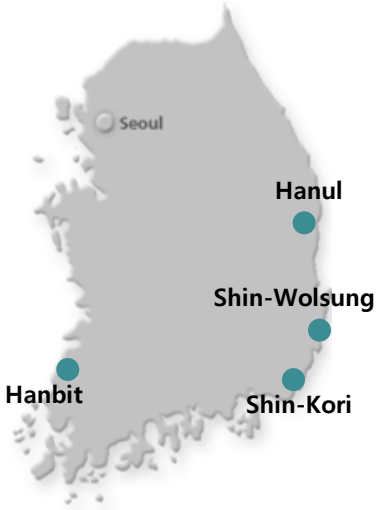
- **Recent Projects**
  - Technical support for license application to replace the steam generator for Hanul #1,2
  - Technical consulting for license application to increase the output for Hanul #1,2
  - Improvement of facilities at Yeosu #2
  - hundreds of small projects are in progress

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
	#3,4	1,000	Mar `95 / Jan `96	DOOSAN	KEPCO E&C	PWR (OPR1000)
	#5,6	1,000	May `02 / Dec `02	DOOSAN	KEPCO E&C	
Hanul	#1,2	950	Sep `89 / Sep `88	Framatome	Framatome	PWR
	#3,4	1,000	Aug `98 / Dec `99	DOOSAN	KEPCO E&C	PWR (OPR1000)
	#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	



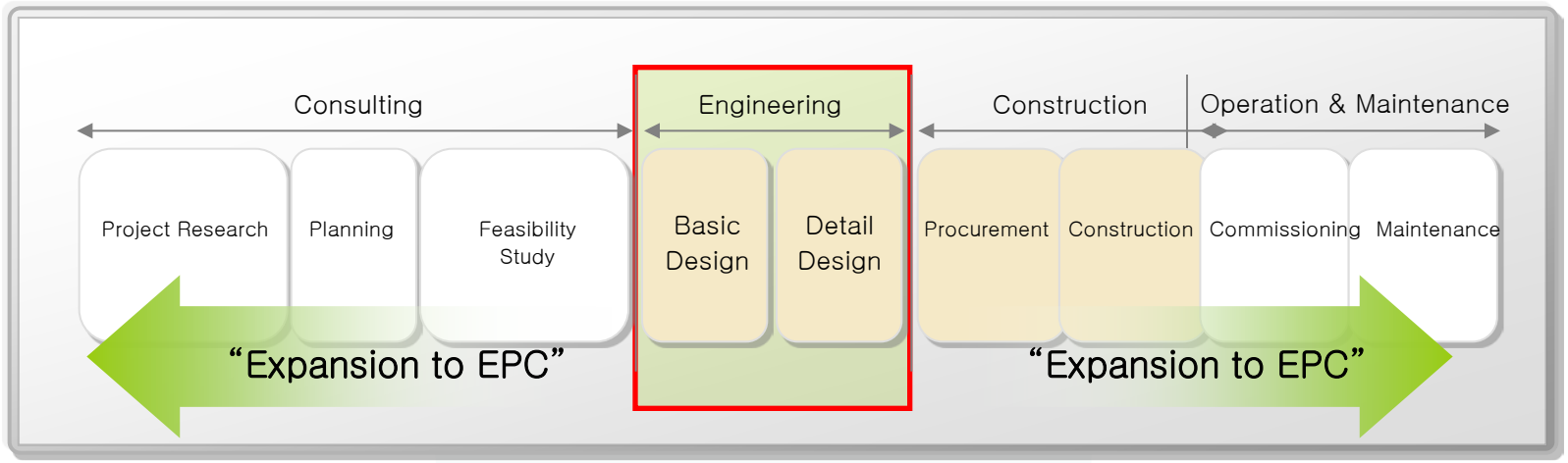
• Developing Canada PHWR O&M Market

- 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


KTX Project


Incheon Int'l Airport

POWER PLANTS


Nuclear


Thermal

PRIVATE SOC

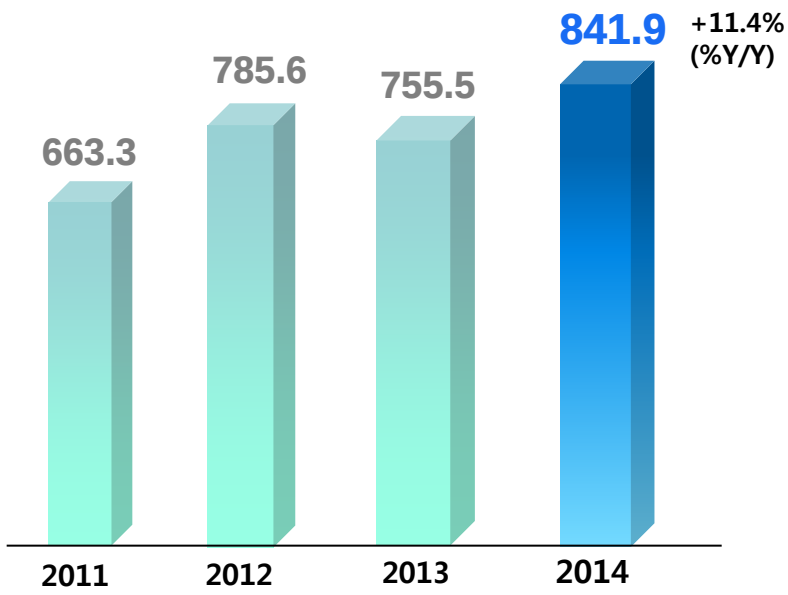

Incheon Int'l Airport Rail


Bridge of Busan-Gejei

2014 FY

• Revenue

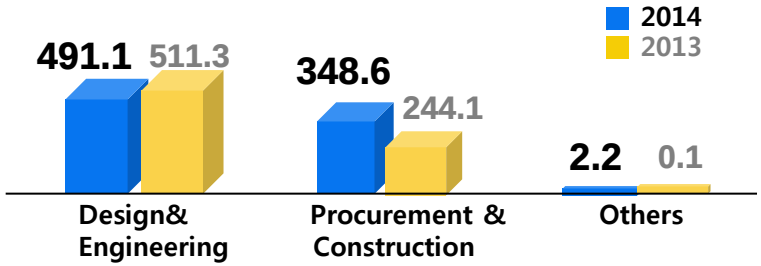
[Unit: KRW bn.]



• Revenue Breakdown

▣ By Business Area

[Unit: KRW bn.]



▣ By Division

[Unit: KRW bn.]

	Nuclear		Thermal		Others	
2014	377.6	(44.8%)	442.6	(52.6%)	21.7	(2.6%)
2013	360.2	(47.7%)	373.8	(49.5%)	21.5	(2.8%)

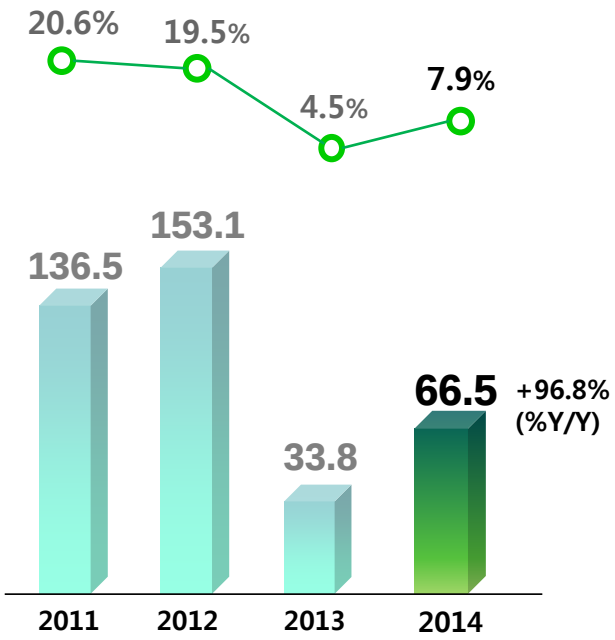
▣ By Region

* KEPCO E&C has adopted K-IFRS(Korean International Financial Reporting Standards) from FY `11 in line with the national policy.

2014 FY

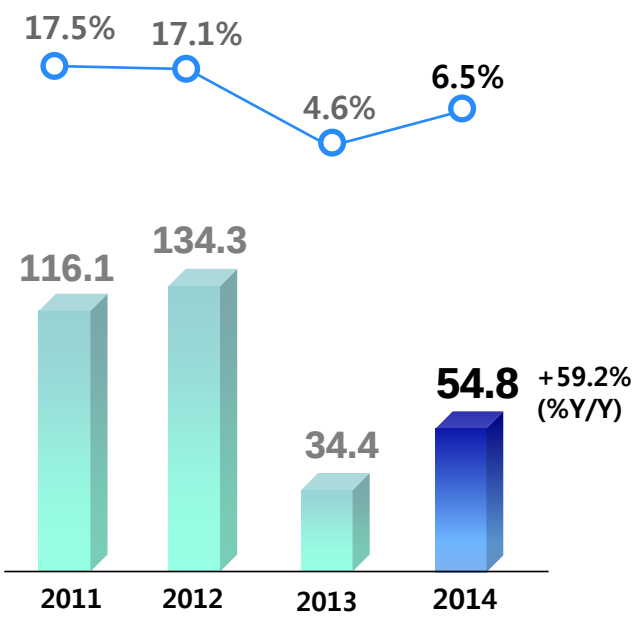
• Operating Income /Margin

[Unit : KRW bn.]



• Net Income /Margin

[Unit : KRW bn.]

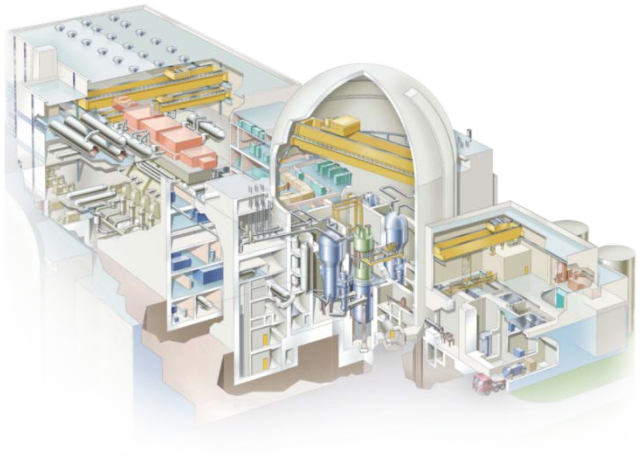


• Quarterly Overview

[Unit : KRW bn.]

	2014 4Q	2014 3Q	2013 4Q
Revenue (%Q/Q)	**259.7 (34.2)**	193.0	240.3
Operating Income (%Q/Q)	**104 (-11.1)**	117	-74
Net Income (%Q/Q)	**93 (9.4)**	85	-32

* KEPCO E&C has adopted K-IFRS(Korean International Financial Reporting Standards) from FY `11 in line with the national policy.



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