Doosan Heavy Industries & Construction

Doosan Heavy Industries & Construction

'17 Results and '18 Plans

2018.2.

Disclaimer

This presentation was prepared for the convenience of investors. The financial figures contained in this presentation are K-IFRS consolidation and DHI operation* basis.

Also, this presentation has been prepared in advance prior to the completion of external audit, only for the convenience of investors. Accordingly, it may be subject to change during the course of audit.

This presentation is provided only as a reference material. Doosan Heavy Industries and Construction assumes no responsibility for your decisions.

* DHI Operation : DHIC Parent & Overseas Subsidiaries(DPS and etc.)

Table of Contents

DHIC_Summary

Orders recorded level of KRW 5T due to cancellations and delays in some projects under the government's energy conversion policy. Sales and OP decreased YoY due mainly to the suspension of domestic nuclear Shin Kori 5&6.

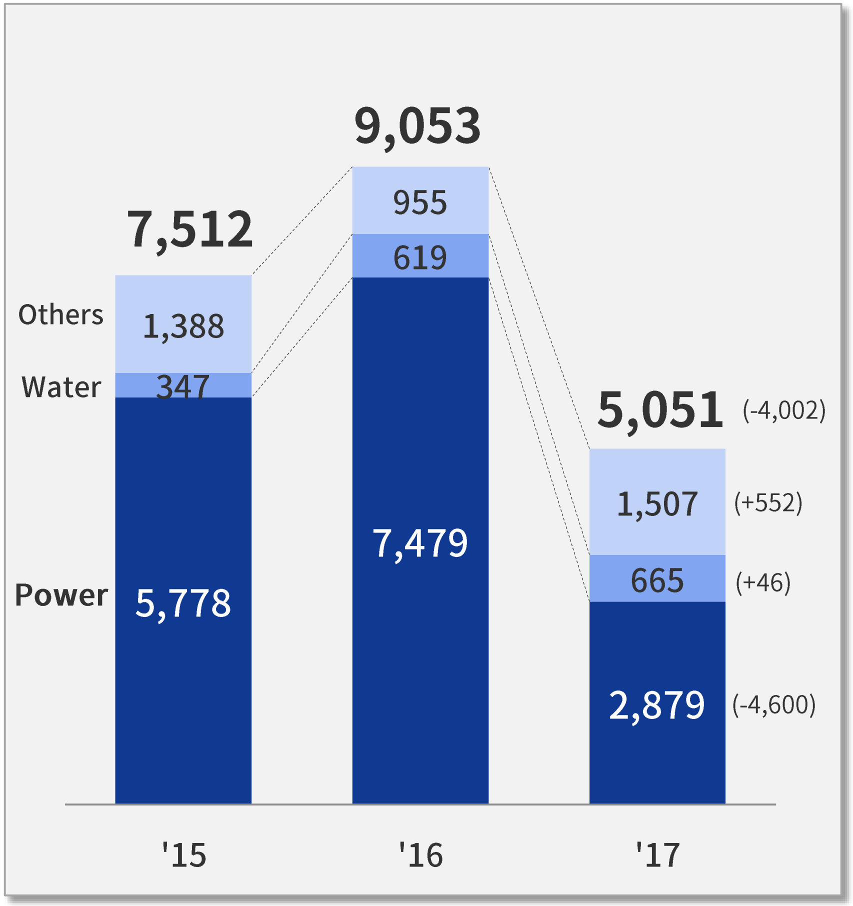
(Unit : KRW B., %)

Category	2016	2017	Difference(YoY)
Order	9,053	5,051	-4,002
Backlog	19,473	18,780	-693
Sales	6,201	5,744	-457
OP	287	190	-97
OPM(%)	4.6%	3.3%	-1.3%p
EBITDA	528	436	-92
Non-OP	-308	-341	-33
Interest P/L	-150	-170	-20
FX	-7	-33	-26
Others	-151	-138	+13
Net P/L	20	-126	-146

DHIC_New Orders

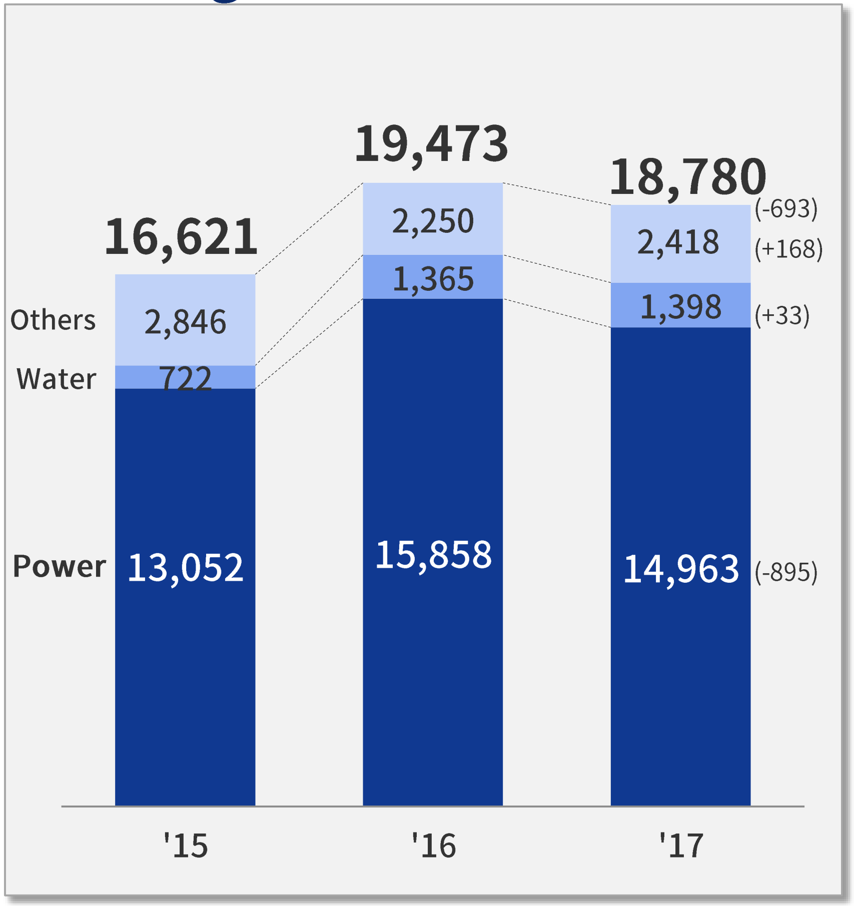
Orders recorded KRW 5T due to cancellation of domestic nuclear Shin Hanul 3&4 and delay of domestic coal-IPP. Backlogs maintained at 3 times of sales.

Orders



Backlogs

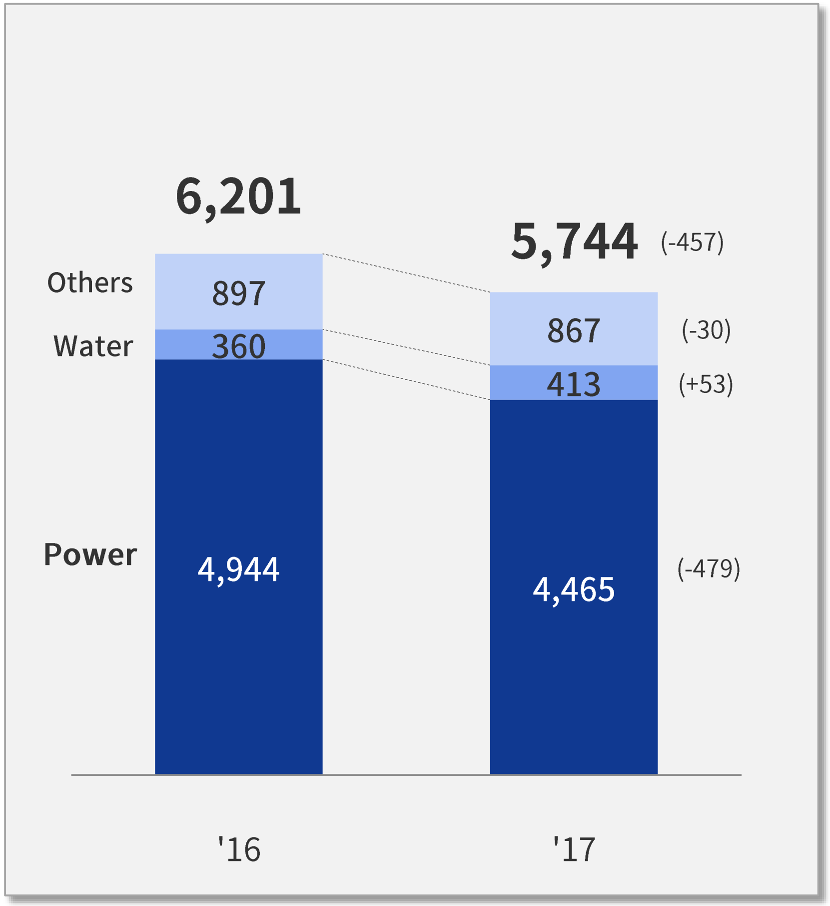
(Unit : KRW B.)



DHIC_Sales / OP(%)

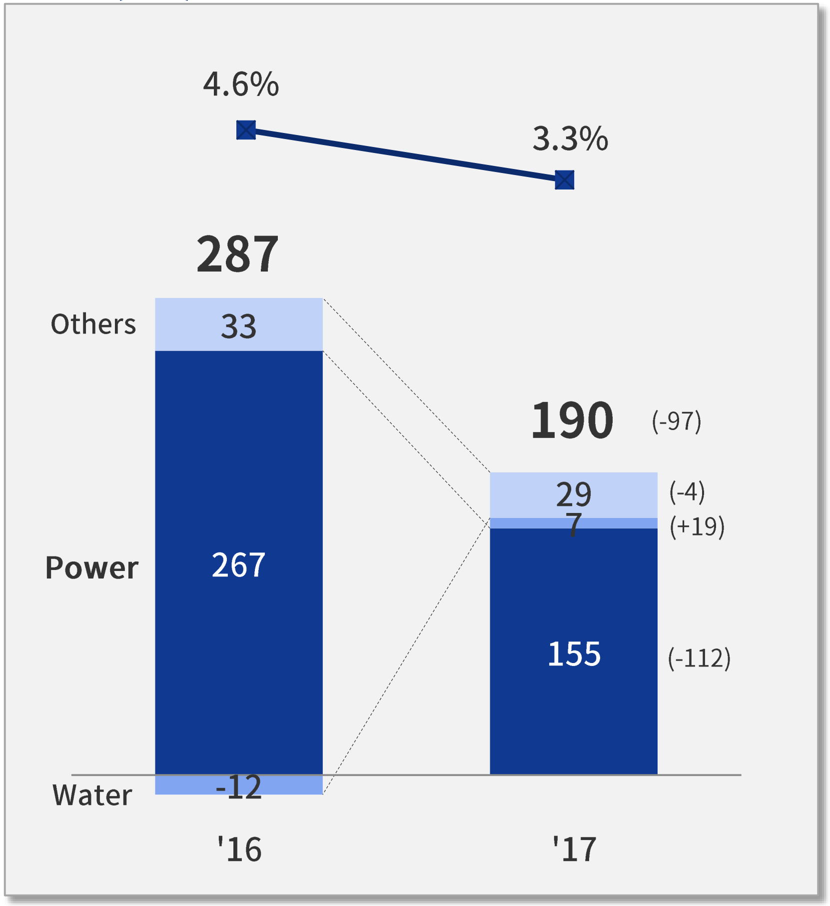
Sales and OP decreased YoY due mainly to the suspension of domestic nuclear Shin Kori 5&6.

Sales



OP(%)

(Unit : KRW B., %)



DHIC_Balanced Sheet

(Unit : KRW B., %)

Category	2016 end	2017 3Q	2017 end	Difference (YoY)
Current Assets	4,739	4,688	**4,221**	-518
Cash & Cash Equivalent	730	619	**898**	+168
Non-Current Assets	9,924	10,341	**10,511**	+587
Total Assets	14,663	15,030	**14,732**	+69
Total Liabilities	8,745	9,118	**8,750**	+5
Net-Debt	3,974	5,021	**4,301**	+327
Total Equity	5,918	5,912	**5,982**	+64
Total Liabilities and Equity	14,663	15,030	**14,732**	+69
Total L/E Ratio	147.8%	154.2%	**146.3%**	-1.5%p

DHIC Parent_Summary

(Unit : KRW B., %)

	2016	2017	Difference (YoY)
Sales	4,705	4,337	-368
OP	283	226	-57
OPM(%)	6.0%	5.2%	-0.8%p
Non-OP	-576	-242	+334
Interest P/L	-121	-142	-21
FX	-67	5	+72
Others	-388	-105	+283
Net P/L	-231	16	+247

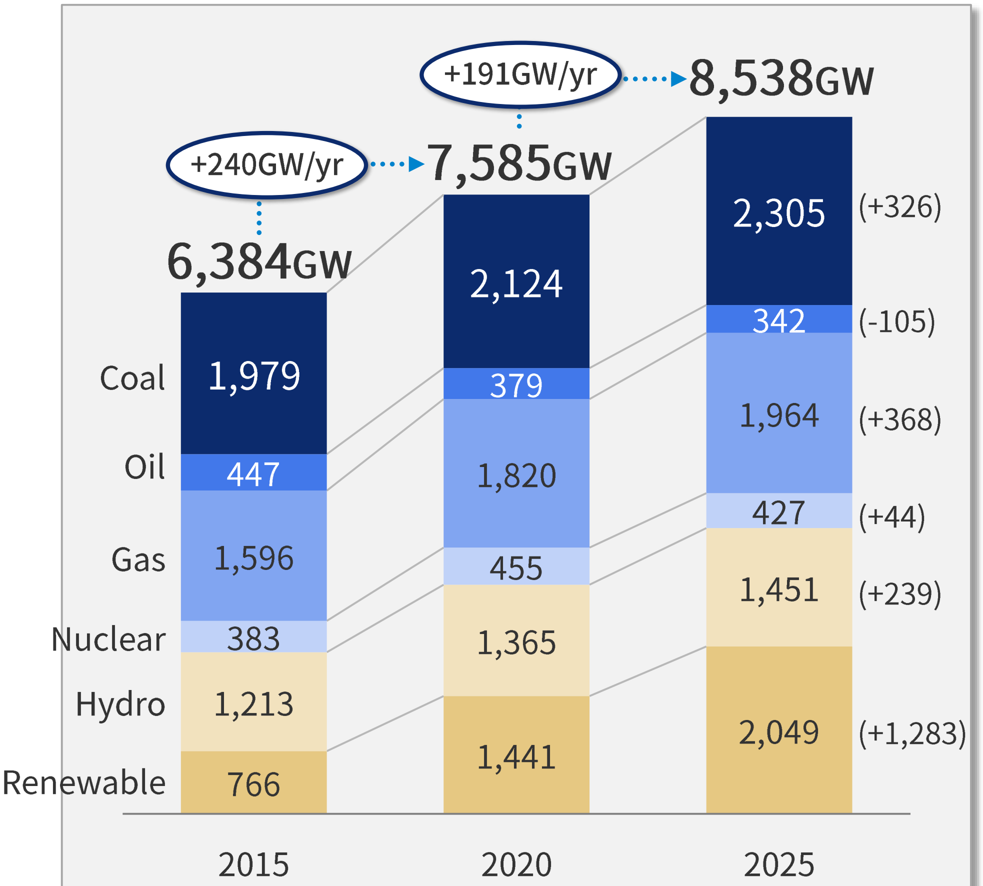
Table of Contents

Market Forecast_Power Plant

Expansion of renewable energy is expected to be the fastest.
However, demand of conventional energy such as LNG and coal to be continued.

Power Plant

(Unit : GW, Installed Capacity)



※ Reference : IHS CERA 2017

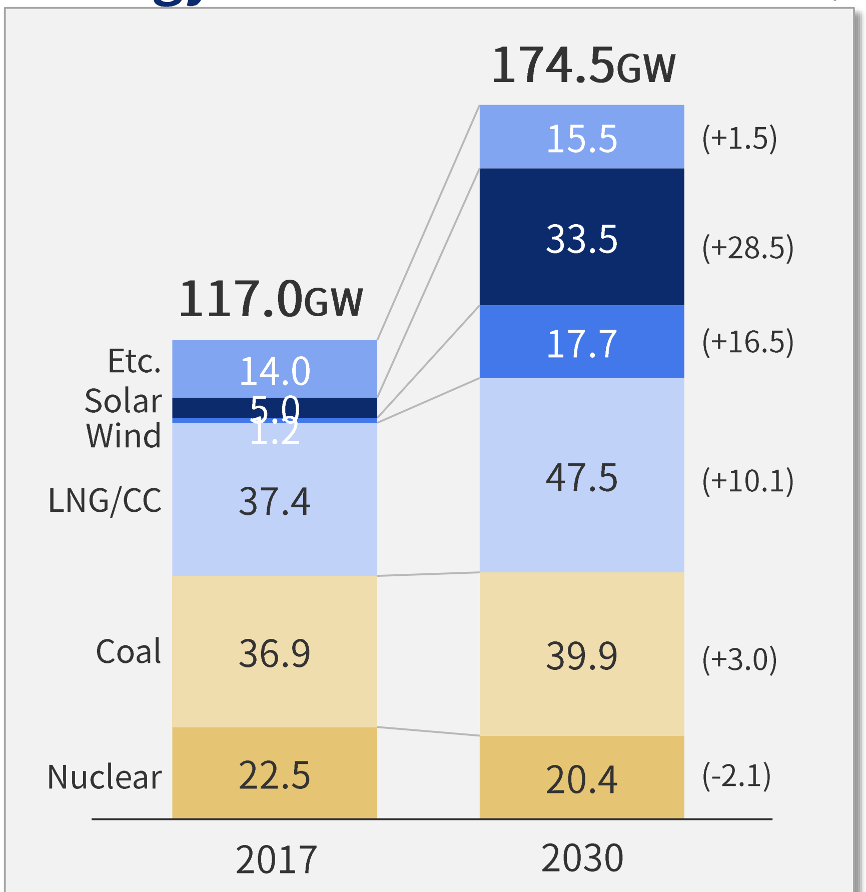
- Coal Power market to continue in South-east Asian countries
  - R&M* and AQCS** investment also to expand due to tightening of environmental regulation
- Gas Power to expand due to environmental regulation and balancing power needs for renewables
  - possible to slowed down for the short term
- Nuclear also to continue
  - new building is in progress at China, Russia, India and UK
  - KSA and some countries are considering new projects
- Expecting rapid expansion of renewables
  - focusing on wind and solar
  - Besides developed countries, India and SE-Asia markets are also promising
  - ESS market also to expand for balancing needs

* R&M : Renovation & Modernization
** AQCS : Air Quality Control System

Market Forecast_Domestic Market

Due to 8th national power supply and demand plan, domestic market to be driven by Renewables, LNG/Combined Cycle and environmental facilities.

Energy Mix of Korea (Unit : GW, Installed Capacity)



※ Reference : 8th national power supply and demand plan

- Coal Power to focus on R&M and AQCS
  - Samcheok PosPower is the last of new building Coal PP project in Korea*
  - investment for AQCS to increase to reduce fine dust
  - R&M for existing PP to increase
- Nuclear business to focus on decommissioning and nuclear-waste handling
  - new building/life-extension prohibited
- LNG PP to add 7.2GW on top of 7th plan
  - also, utilization rate to increase due to environmental(fine dust) issue
  - GT service market expect to expand
- Renewable energy to expand rapidly
  - wind 16.5GW, solar 28.5GW to ’30
  - off-shore wind power to expand to 13GW

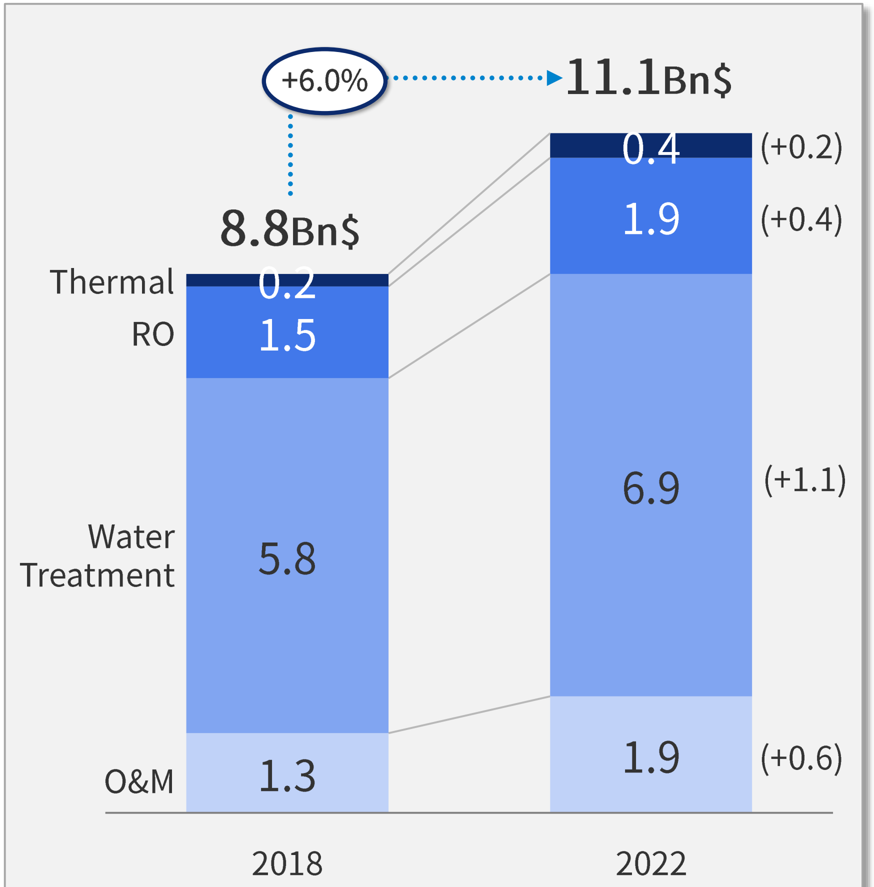
* Dangjin Echo plant changed the plan from coal-fired to LNG

Market Forecast_Water

Water market is steadily growing due to lack of water resources and strengthening of environmental regulations

Water market

(Unit : Bn$,CAGR)



※ Reference : GWI (Global Water Intelligence)

- Desalination business continue to grow around the Middle East area,
  - new projects from other region(India, Egypt, Chile and etc.) are on progress
- Due to lack of national funding with Middle East countries, majority of new projects would be IWP*
- Water shortage, urbanization and strengthened regulation to drive new water projects in east-Asia
- Accessible O&M market to expand due to privatization of existing Water plants in KSA

* IWP : Independent Water Project

8th plan_impact to DHIC

The size of new business(Offshore wind, Coal-R&M, etc.) opportunity by national energy conversion plan to surpass the negative impacts from cancelled nuclear and coal pjts.

- impact

1. Nuclear new building cancelled
   - Shin Hanul #3,4, Cheonji #1,2, Daejin #1,2
     → Total 6 units(8.8GW) cancelled
2. Some coal pjts cancelled or delayed
   - Confirm to build : Samcheok Pospower (2GW), Gangneung AnIn(2GW)
   - Dangjin Ecopower : converted to LNG/CC

+ impact

1. Rapid expansion of offshore wind market
   - '30 wind power capa. target 17.7GW(Offshore 13GW)
   - KRW 5~6T(1.3GW) sized new market to form per annum
   - Offshore wind market to expand rapidly where DHIC is now dominating
2. Expansion of coal-R&M business
   - GENCO to invest KRW 7.5T to improve environmental facilities and to reduce fine dust ('18~'22)
3. New business
   - LNG : Expand capacity 7.2GW[2] by 2030
   - Nuclear Decommissioning: KRW 640B/unit
   - Solar-linked ESS/Microgrid biz

DHIS aims to secure growth momentum in the Offshore wind and Coal-R&M service markets

[1] Fine dust reduction measures(Sep.26, 2017)
– Eco-friendly facility reinforcement : 0.2T, Retrofit/Replacement : 6.2T, Adding eco-friendly facility for ongoing pjts : 0.8T

[2] coal to LNG conversion 4.1GW + new LNG PP 3.1GW

8th plan_new business opportunities

Changing portfolio adjustment to LNG, Renewables and Service business and Promoting nuclear export.

Market changing

- Domestic Nuclear PJTs cancelled
  - Shin-hanul and etc. : 6 units
- Overseas Nuclear PJTs promoted/accelerated
- Domestic Coal PP pjt converted to LNG CC
  - Dangjin Echo(1GW)

	As is	+ Additional
LNG	• DHIC GT model test for commercialization	• Domestic full-sized GT (7.2GW) • Domestic medium/small sized GT • Domestic/overseas GT service
Renew-ables	• 0.5GW/yr of domestic wind turbine(7th plan)	• Domestic wind turbine market expand to 1.3GW/yr • ESS market also to expand
Service /AQCS[1)]	• Executing R&M Pjt of Boryeong #3 - national Pjt to reform all of standard Coal PP[2)]	• Expansion of domestic O&M, AQCS[3)] opportunities • Digital service business

Switch focus from domestic to overseas & Back-end oriented

	As is	Additional
Nuclear	• APR1400 6 units (Domestic, 8.8GW) → Cancelled	• India AP1000(WEC) • KSA SMART Nuclear • KSA (2units) • U.K. Moorside(2units) • Czech Rep.(2untis) • Middle East New PJTs Total 14.2 GW

1) ACQS: Air Quality Control System
2) Subject to apply to all other 500MW standard coal boilers(17 units)
3) Awarded Shin-boryrong #1,2('17.12), expect to award additional pjts

New business_Progress of nuclear export

Overseas nuclear PP timeline

'18	'19	'20	'21	'22
India AP1000 1.15GW*4	KSA SMART 110MW*2	KSA Full-sized 1.4GW*2	Europe(UK/Czech) and others 1.4GW*4 + 1.0GW*1	

Progress

Project	Progress
India AP1000 (WEC)	Key equipment supply and localization is in negotiation with WEC
KSA SMART & full-sized Nuclear	KSA approved to build SMART Nuclear(Jul.'17), announced to build full-sized nuclear(Sep.'17) Minister of industry plans to visit KSA and UAE to cooperate in nuclear business and to promote new orders(Feb.'18)
U.K. Moorside	MOU signed for cooperation of KOR-UK nuclear (Nov.'17) KEPCO awarded for preferred bidder to acquire Nugen(Dec.'17)
Czech Rep. Temelin	Nuclear amnesty of Czech visited DHIC and nuclearPPs in Korea (Dec.'17) Held Czech-KOR 'Nuclear Power Cooperation Meeting' (Nov.'17)

EU-APR certification

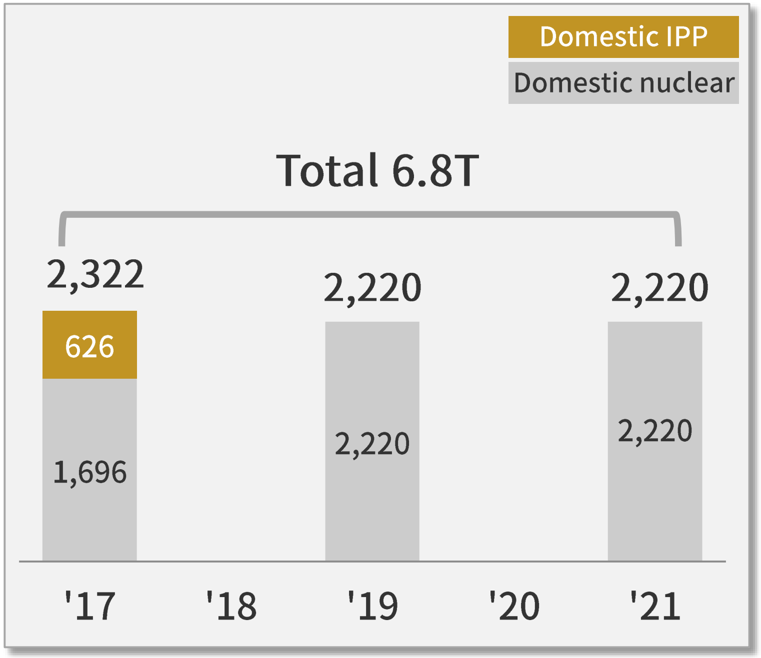
- **Certified EUR with EU-APR model, modification of APR1400 for exportation in EU areas(Oct.'17)**
  - Completed the certification in shortest time with high reliability of Korea nuclear system

New business_long term order forecast

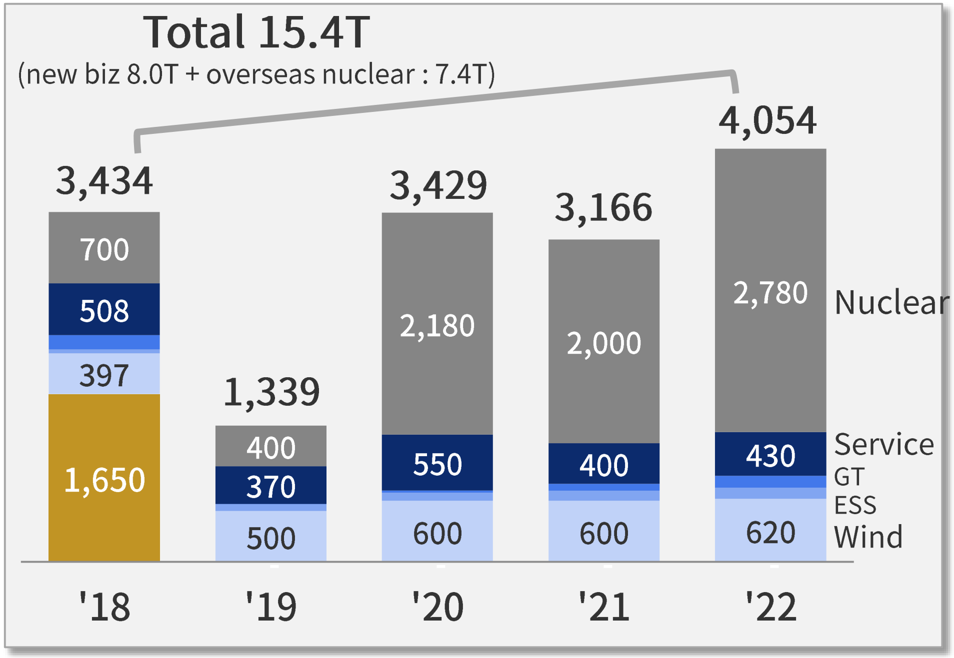
Expecting at most 15.4T of new orders from domestic new biz and overseas nuclear during '18~'22. These new opportunities are good enough to make up negative impact from 8th plan and stimulate new growth of DHIC.

(Unit : KRW B.)

Cancelled or Delayed



New biz and Overseas nuclear



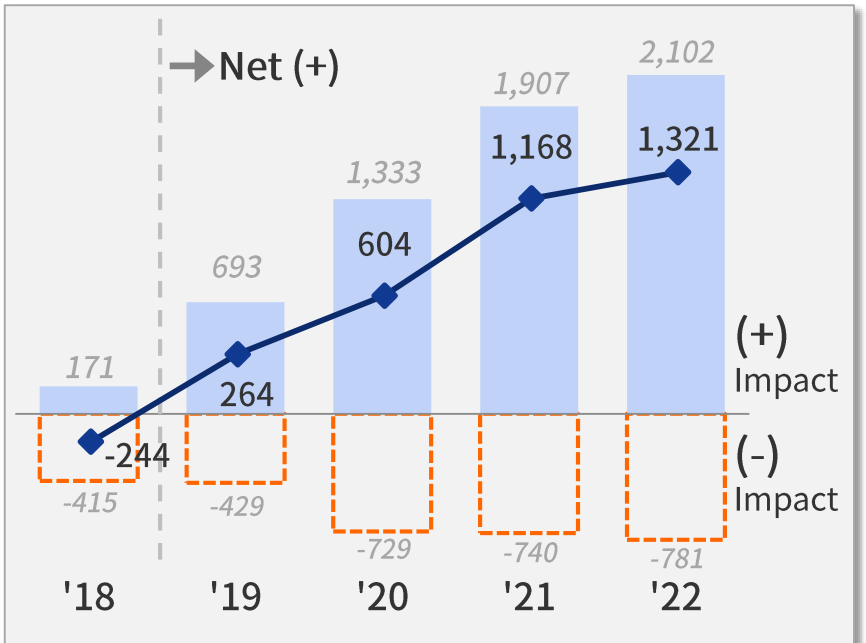
- Total volume of cancelled or delayed pjts by 8th plan is KRW 6.8T
  - Nuclear(6.1T) : Hanul, Cheonj, etc.
  - Samcheok(0.7T): delayed, but confirm to build from '18

- Forecast 15.4T of orders from new biz(wind, GT etc.) and overseas nuclear in total, which is more than double of cancelled or delayed pjts.
- Samcheok PosPower is delayed but order scope expanded from equipment only to EPC

New business_long term performance forecast

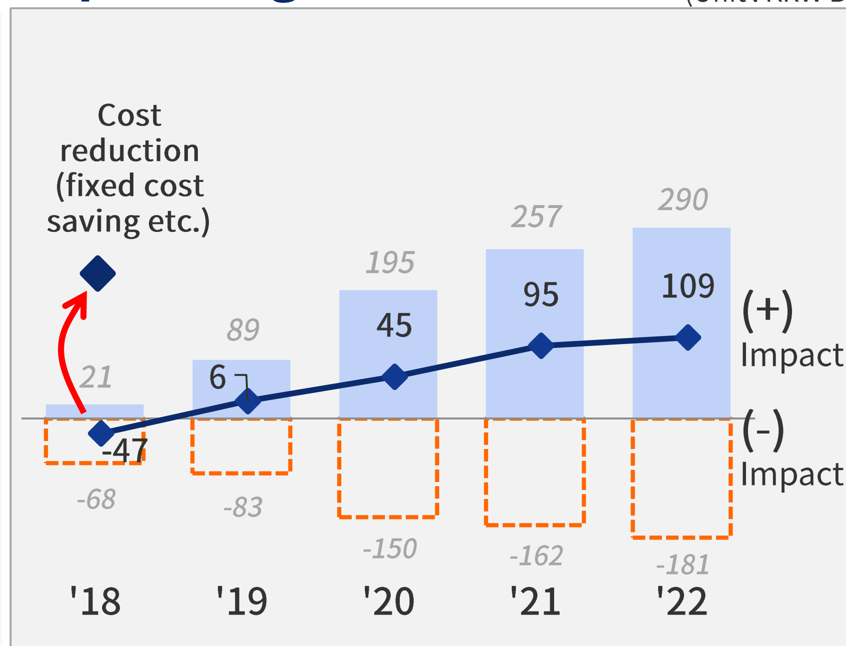
From '19, (+)impact of new biz and overseas nuclear to surpass (-)impact of the cancelled/delayed pjts and to drive performance growth. Sluggish OP in '18 will be made up by cost reduction efforts.

Sales



Operating Profit

(Unit : KRW B.)



- From '19, (+)impact of new biz to surpass (-)impact of cancelled/delayed pjts, when new orders(domestic IPP, service) of '18 converted to sales in full-scale
- Sales of new biz will exceed KRW 1T from '20

- OP-wise, (+)impact of new biz to surpass (-)impact from '19
- Since new biz effect is not enough to cover (-)impact in '18, DHIC is in progress of additional cost reduction efforts to improve OP.

New business_achievements in Q4.'17

Existing Business

diversification	• Provisional contract to south-Africa Thabametsi CoalPP EPC(Nov.'17)
ground-breaking of pending PJTs	• BOT[1] contracted to Vietnam Nghi Son2 CoalPP EPC(Nov.'17) • NTP[2] of Indonesia Muara Tawar LNG/CC conversion PJT (Nov.'17)

Overseas Nuclear

nuclear export	• EU-APR model acquired EUR Certification (Oct.'17) • MOU signed for cooperation of KOR-UK nuclear • Held Czech-KOR 'Nuclear Power Cooperation Meeting' (Oct.'17)

New Business

renewables	• Completion of first commercial off-shore wind farm (Jeju island, 30MW, Nov.'17) • LTSA singed for JeonNam on-shore wind farm(10yrs O&M, 42MW, Nov.'17) • Proffered bidder for U.S. Consumers Energy's ESS pjt, California (final contract scheduled in Feb.'18)
LNG	• Completion of largest domestic combined heat&power plant(757MW, Nov.'17) • Contract signed for first overseas GT+ST pkg. PJT(Thailand SIPCO2 , Nov.'17)
Service/ ACQS	• Advanced FGD[3] awarded for Shin-boryeong #1,2(Dec.'17) • Opened 'e-Brain Center' to cooperate with EWP[4] in digital service(Jan.'18) • Awarded reactor-head for replacement (Jan.'18)

1) BOT : Build Operate Transfer
2) NPT: Notice to Proceed
3) FGD : Flue Gas Desulfurizer
4) EWP : Korea East-West Power

’18 Business Plans

Planned to increase orders by 40% YoY, sales by 6% YoY, and OP margin to improve 170bps.

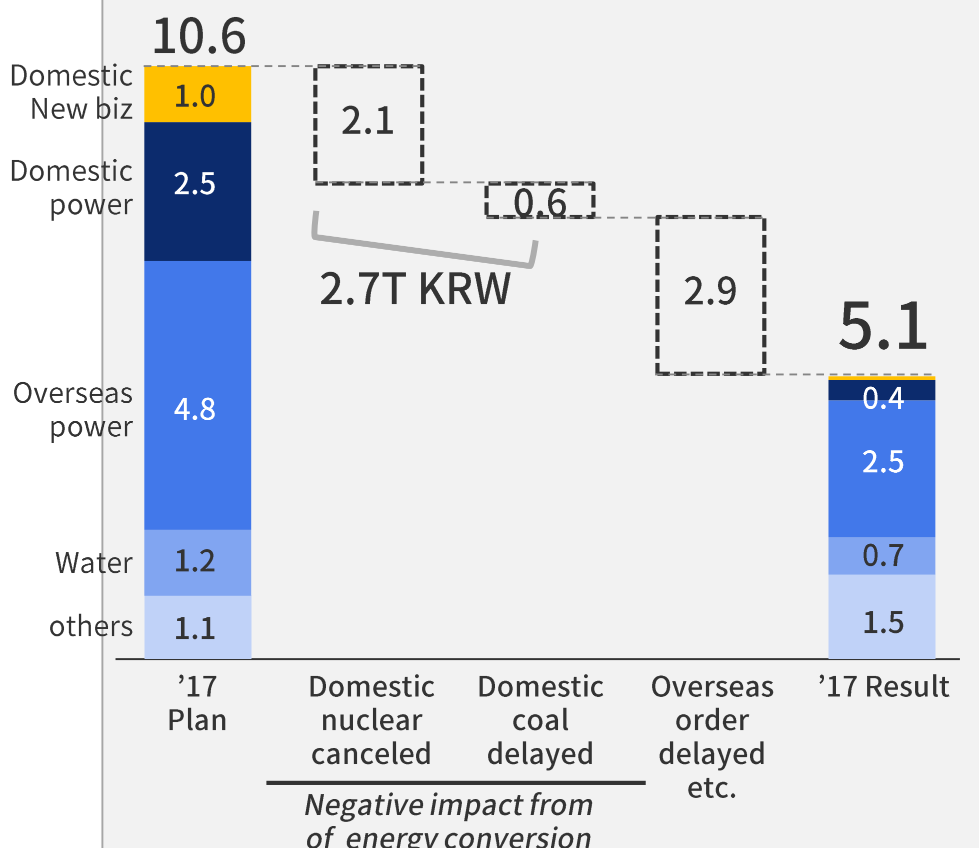
(Unit : KRW B, %)

Category	’16	’17	’18(E)	YoY
Order	9,053	5,051	6,900	+1,849
Sales	6,201	5,744	6,060	+316
OP	287	190	303	+113
OPM(%)	4.6%	3.3%	5.0%	+1.7%p

’18 Order Forecast

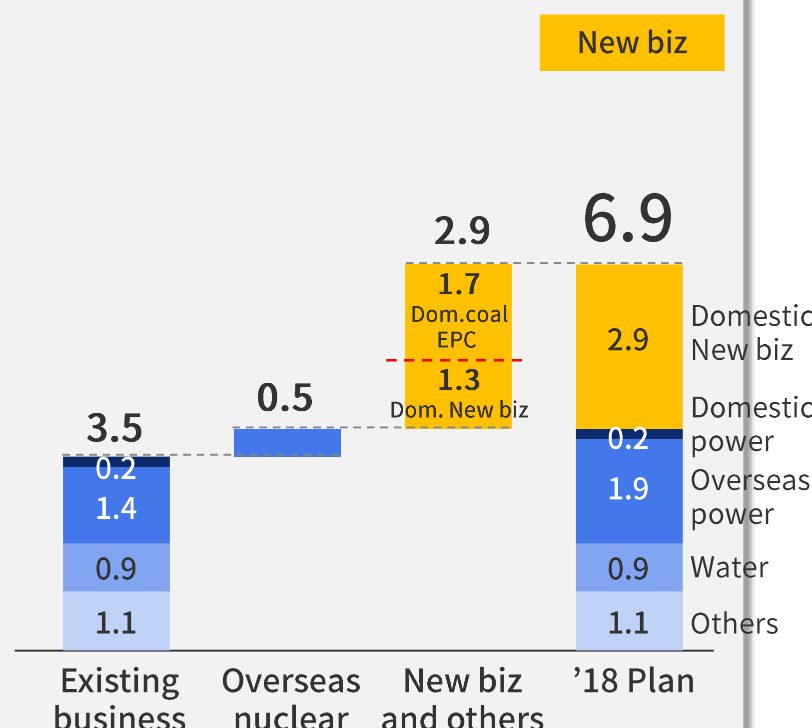
’17 orders underperformed due to negative impact from national energy conversion policy. Expect KRW 6.9T of new orders in ’18, including 2.9T of new business regarding delayed domestic coal EPC pjt and new business opportunities

’17 Result Analysis



’18 Forecast

(Unit : KRW T.)



1.Overseas nuclear refers WEC India pjt
2.Domestic coal refers Samcheok PosPower pjt
3.New biz include domestic wind and R&M of domestic coal plants

Table of Contents

Consolidated_Summary

Sales increased 4% YoY thanks to groundbreaking performance of Infracore.
OP margin improved 70bps, and net loss decreased 49%.

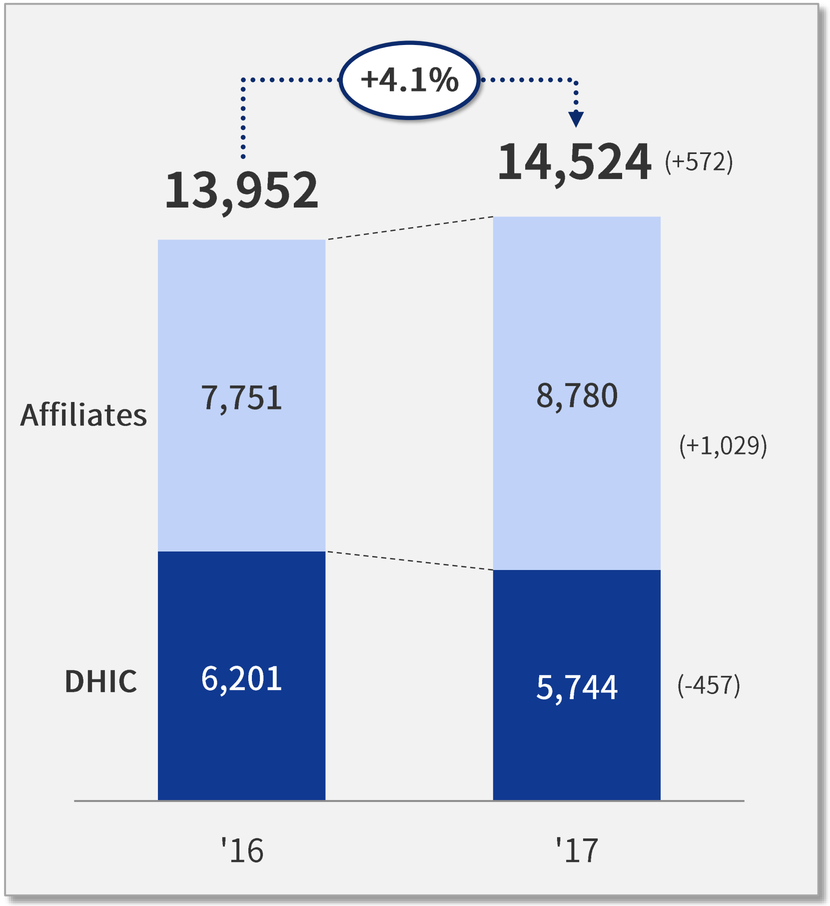
(Unit : KRW B, %)

Category	2016	2017	Difference (YoY)
Sales	13,952	14,524	+572
OP	798	926	+128
OPM(%)	5.7%	6.4%	+0.7%p
EBITDA	1,298	1,427	+129
Non-OP	-1,042	-808	+234
Interest P/L	-473	-453	+20
FX	-32	+15	+47
Others	-537	-370	+167
P/L before income tax	-244	118	+362
Net P/L	-215	-110	+105

Consolidated_Sales / OP(%)

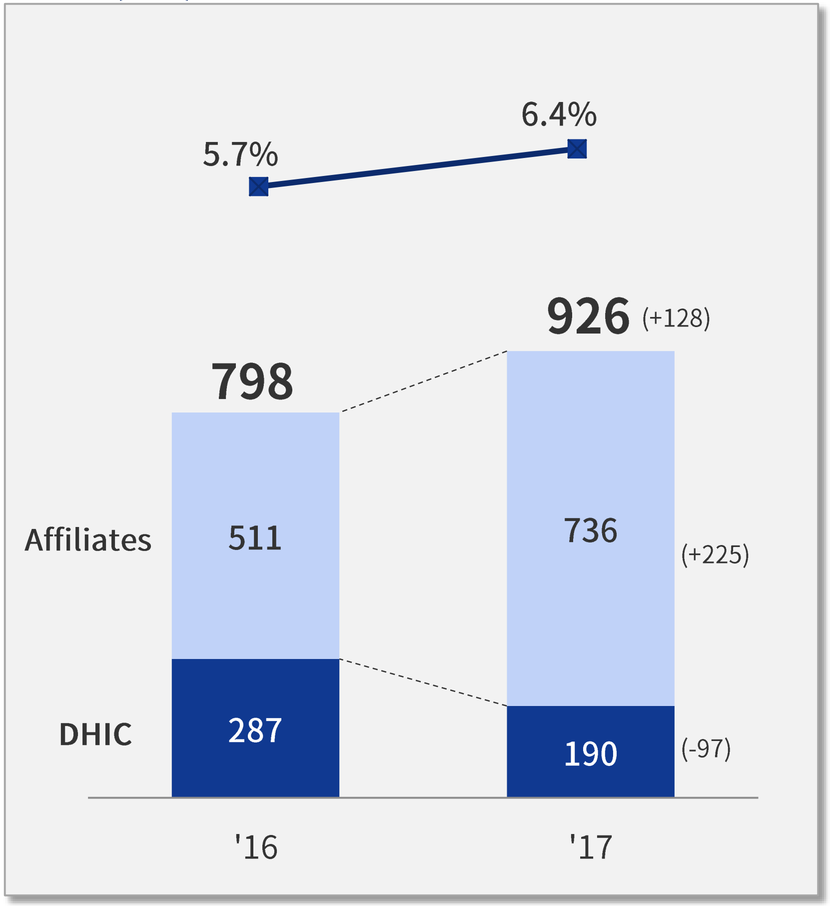
Sales increased 4% YoY backed by Infracore's growth(15% YoY). OP increased 16% thanks to simultaneous growth of affiliates, and OP margin improved 70bps.

Sales



OP(%)

(Unit : KRW B., %)



Consolidated_Balanced Sheet

(Unit : KRW B, %)

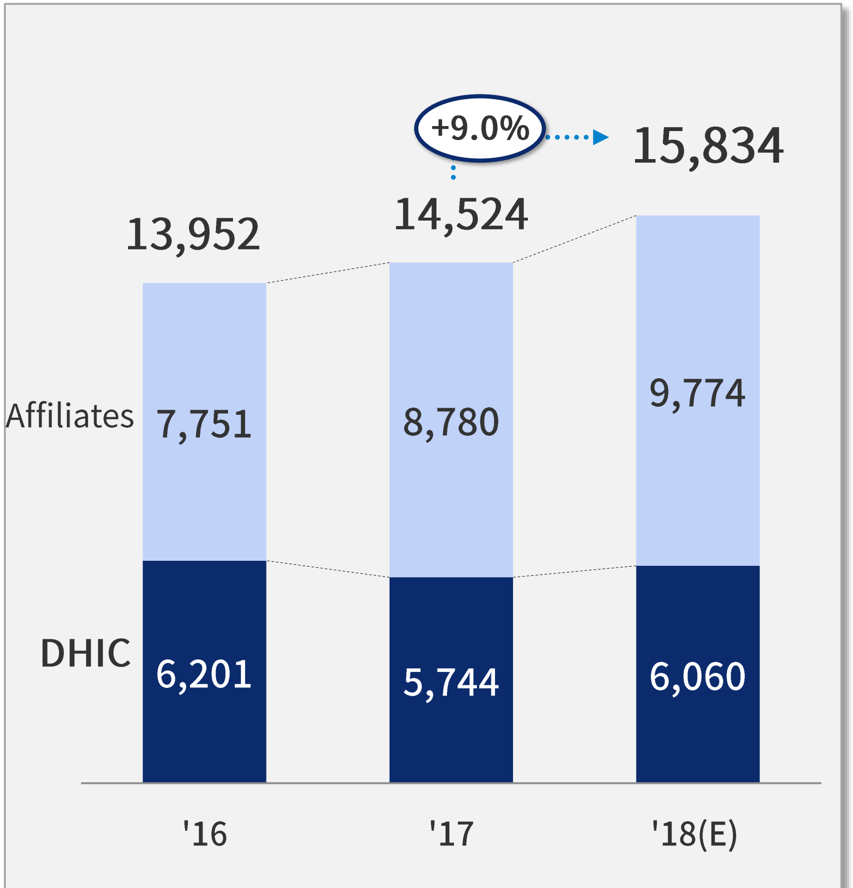
Category	2016 end	2017 3Q	2017 end	Difference (YoY)
Current Assets	9,028	10,484	9,230	+202
Cash & Cash Equivalent	1,586	1,911	2,208	+622
Non-Current Assets	15,804	15,732	15,732	-72
Total Assets	24,833	26,216	24,962	+129
Total Liabilities	18,010	19,102	18,396	+386
Net-Debt	8,847	10,181	9,007	+160
Total Equity	6,823	7,114	6,566	-257
Total Liabilities and Equity	24,833	26,216	24,962	+129
Total L/E Ratio	264.0%	268.5%	280.2%	+16.2%p

Table of Contents

Consolidated_'18 Business Plan

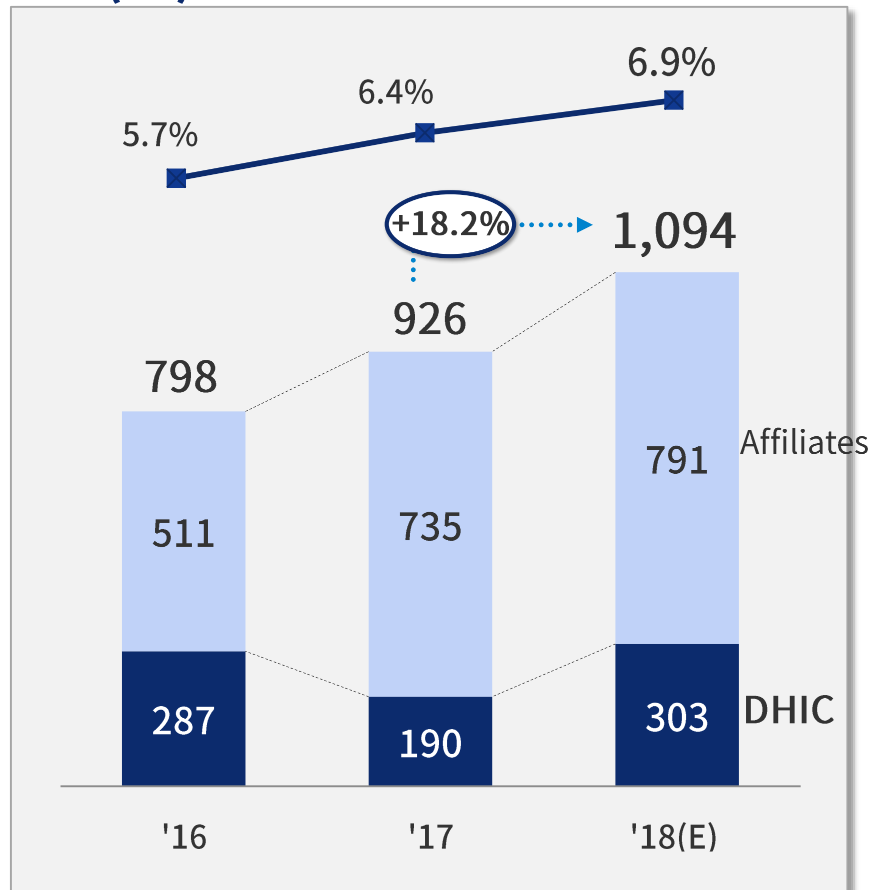
Sales to improve 9% YoY by simultaneous growth of all affiliates including DHIC.
OP to exceed KRW 1T, with OP margin improvement.

Sales



OP(%)

(Unit : KRW B, %)



Appendix. Managerial Consolidated Key Financials

Income Statement (KRW bn)			
Items	**2015**	**2016**	**2017**
Revenue	6,721	6,201	5,744
Operating Profit	264	287	190
EBITDA	511	528	436
Net Income	-223	21	-126

Balance Sheet (KRW bn)			
Items	**2015**	**2016**	**2017**
Cash and Cash Equivalents	1,255	730	898
Current Assets	4,920	4,739	4,221
Non-current Assets	9,624	9,924	10,511
Net Debt	3,469	3,974	4,301
Total Assets	14,545	14,663	14,732
Total Liabilities	8,610	8,745	8,750
Total Equity	5,935	5,918	5,982

Performance Ratios			
Items	**2015**	**2016**	**2017**
Operating Margin	3.9%	4.6%	3.3%
EBITDA Margin	7.6%	8.5%	7.6%
Net Debt / EBITDA	6.8x	7.5x	9.9x
Liabilities to Equity	145%	148%	146%

Q&A