



Doosan Heavy Industries & Construction

Doosan Heavy Industries & Construction '19 3Q Business Results Review



Oct. 2019.

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.

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

- **DHIC (Doosan Heavy Industries & Construction)**
 - Summary
 - Orders
 - Sales/Operating Profit
 - Annual New Orders Forecast
 - Major Business Results
 - Balance Sheet
 - DHIC Parent
- Affiliates
- Back-up

DHIC_Summary

Accumulated 3Q orders recorded KRW 2.1T. And sales increased YoY.
OP decreased in 3Q due to the fixed one –off cost, etc.

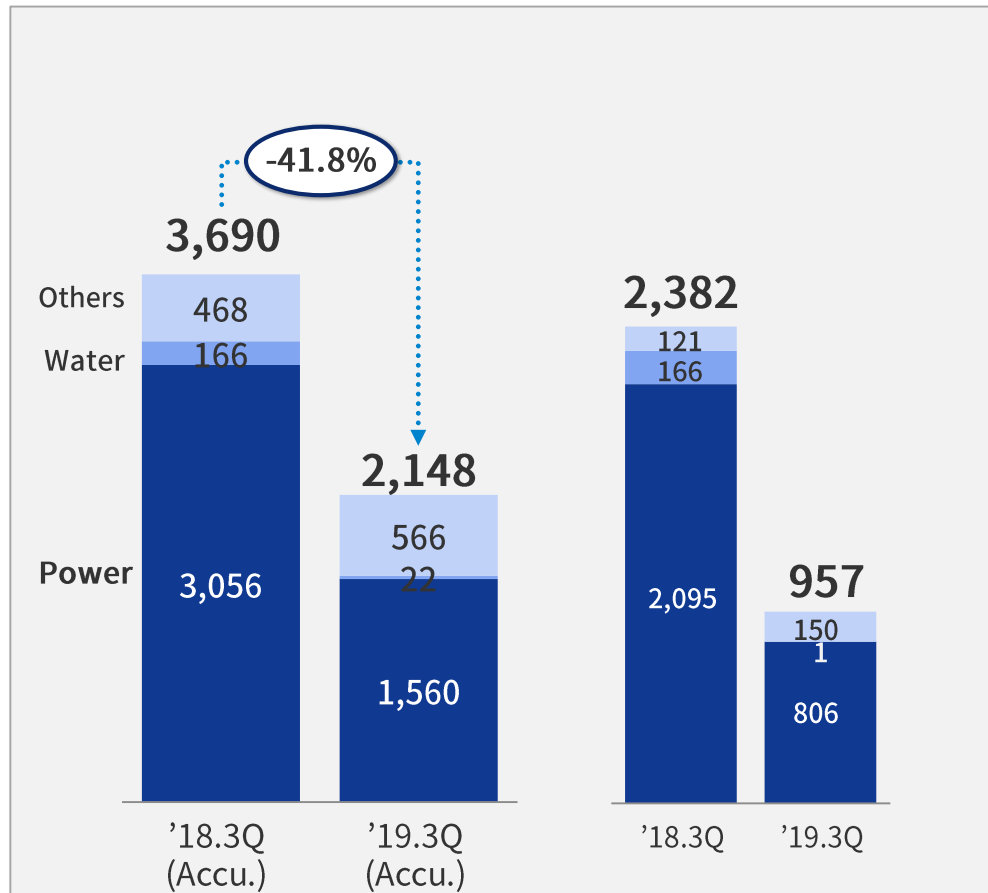
(Unit : KRW B., %)

	'18		'19		YoY	
	3Q	3Q (Accu.)	3Q	3Q (Accu.)	3Q Standard	Accu. Standard
Orders	2,382	3,690	957	2,148	-1,425	-1,542
Backlog		17,159		14,647		-2,512
Sales	1,188	3,769	1,254	3,904	+66	+135
OP	6	135	-36	94	-42	-41
OPM(%)	0.5%	3.6%	-2.9%	2.4%	-3.4%p	-1.2%p
EBITDA	65	319	21	267	-44	-52
Non-OP	-36	-39	-31	-240	+5	-201
Interest	-57	-154	-50	-164	+7	-10
FX	-1	-26	5	6	+6	+32
Others Non-OP	21	141	14	-82	-7	-223
Net P/L	-30	37	-111	-188	-81	-225

DHIC_Orders

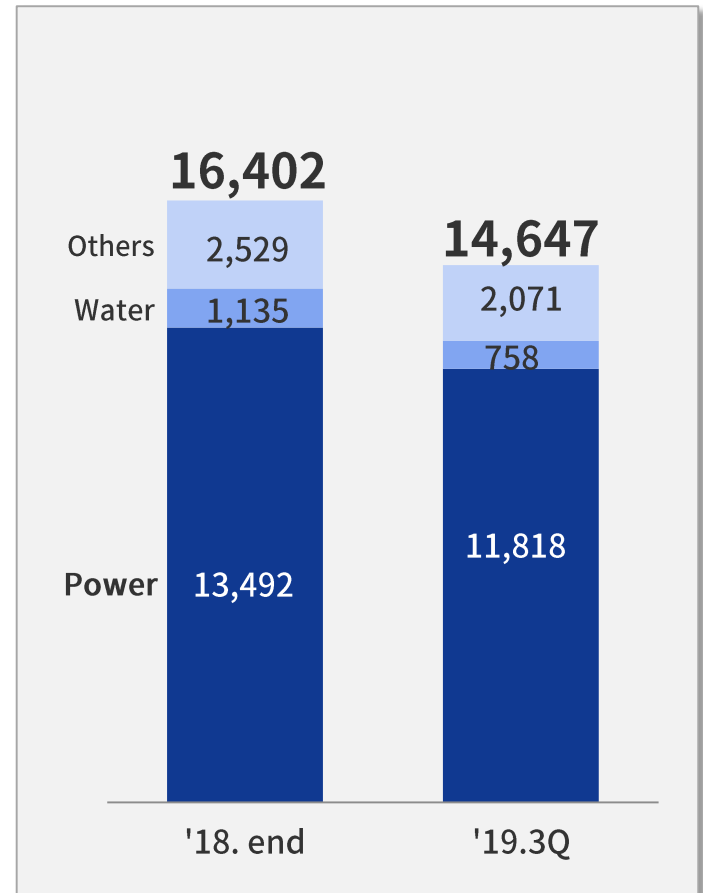
3Q orders recorded KRW 1T. thanks to order recognition of Van Phong 1 PJT, amounting to KRW 550B. in Vietnam. Order backlog maintained at KRW 14.6T.

New Orders



Backlog

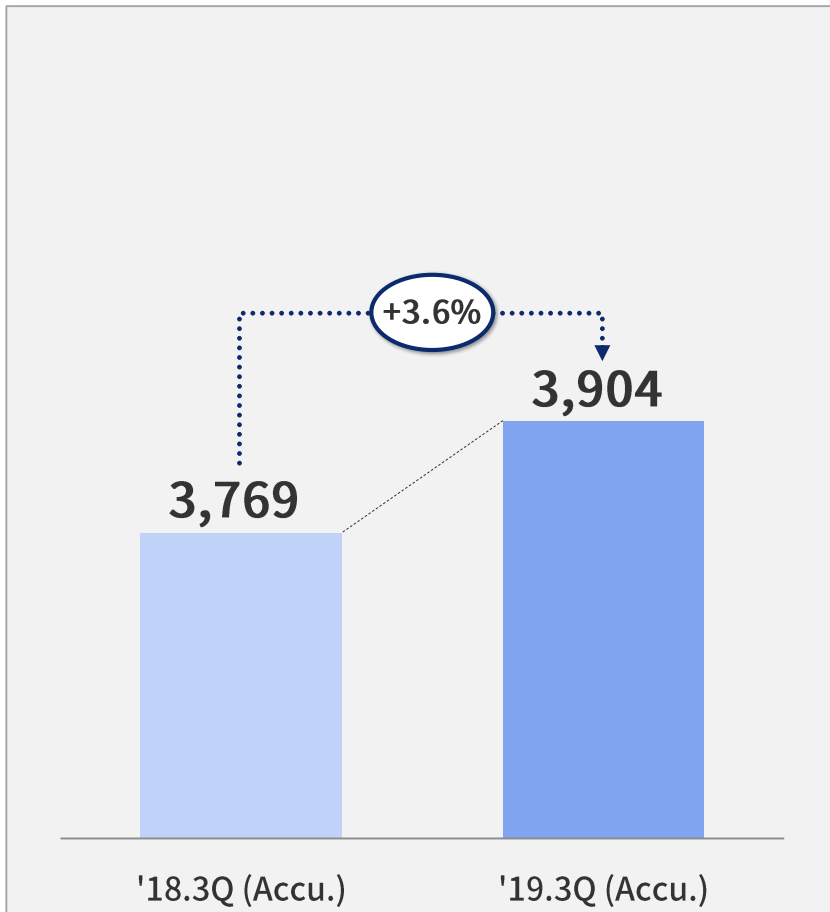
(Unit : KRW B.)



DHIC_Sales / OP(%)

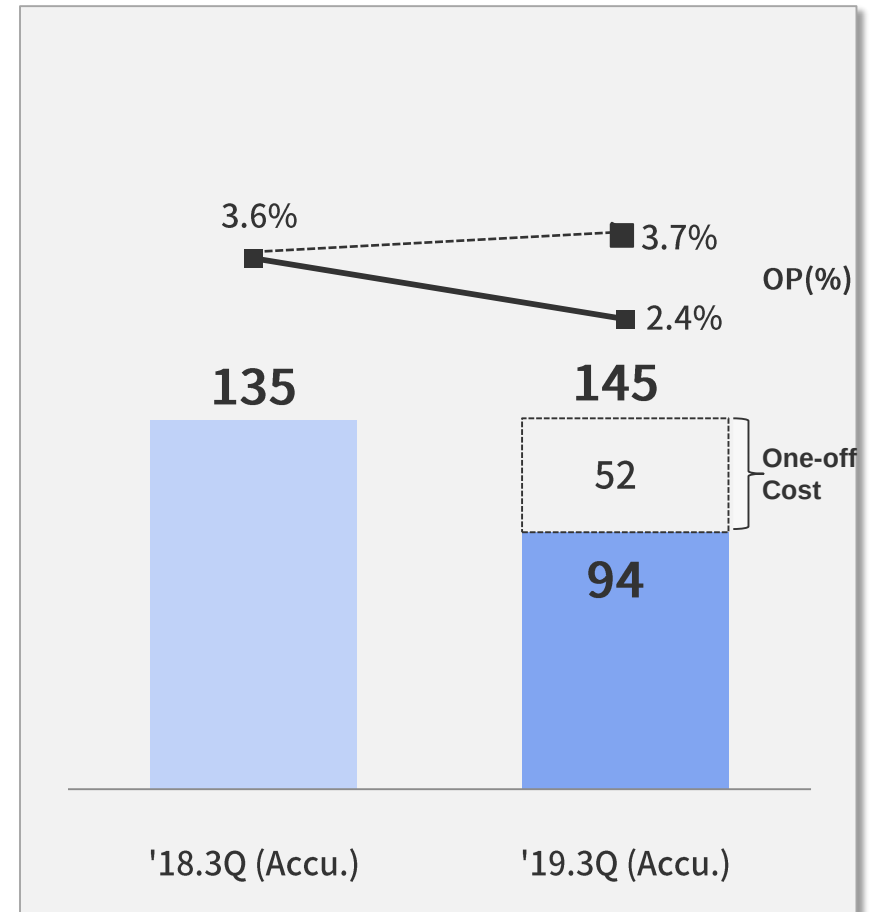
Sales increased YoY thanks to the overseas subsidiaries' sales increase such as DPSI, VINA, etc. OP decreased due to one-off cost reflection.

Sales



OP

(Unit : KRW B., %)

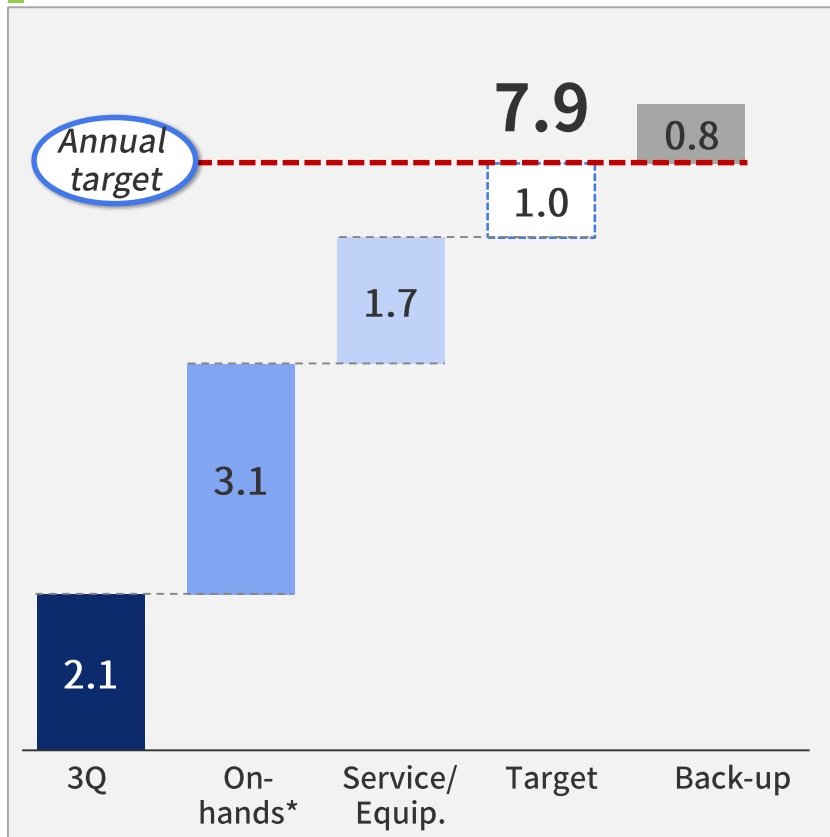


DHIC_Annual New Orders Forecast

3Q accumulated orders recorded KRW 2.1T. If on-hands PJTs of KRW 3.1T. and the annual average level of service/equipment achieved, orders of KRW 6.9T is possible. Then, propel to achieve the annual guidance through the target PJTs.

Order Forecast

(Unit : KRW T.)



On-hands PJT

- Indonesian Jawa 9&10 Coal-fired KRW 1.6T.
- Suncheon Korean House Construction Business KRW 500B.
- UK subsidiary's Nuclear Power Plant Decommissioning KRW 400B.

Others

- Korean CCPP, etc.
- New Business such as Off-shore Wind Power
- Southeast Asian Thermal power EPC, the M.E. Desalination, etc.
- Propel to award many others in new business area of Service, R&M, etc.

* On-hands : Highly possible PJTs to receive new orders in the year by obtaining positions of Private Contract, Sole Bidder, Lowest, etc.

New Business Major Results_After 2Q '19

Major Result on each Business

G/T

- Localized large-sized G/T for power, ranked as the World's 5th own model ('19.09)
 - Expect for import replacement effect on Korean CCPP market hereafter thanks to G/T localization
- Awarding Ulsan CCPP's G/T maintenance PJT for Unit 4~6 (Oct. '19)
 - Succeeded by being credited for the maintenance technology thanks to Ulsan CCPP Unit 3's maintenance PJT's successful completion

New & renewable

- Shipped 20 units of 3MW wind power generator for the Southwestern off-shore wind power (Jul. '19)
 - Plan to generate annual 155GWh power by completing equipment supply for total 60MW volume's wind power complex
- Made an agreement with Austrian Andritz for hydro power business and technology cooperation (Sep. '19)
 - Established the foundation for Korean and overseas hydro power business entrance through securing hydro power's core technology
- Selected as the most preferred bidder for 'Changwon Hydrogen Liquefier Production Plant Business', publically invited by Korea Industrial Complex Corporation (Oct. '19)
 - Plan to build the 1st hydrogen production and liquefier plant facility in Korea, possible to produce 5 tons of liquefied hydrogen per day

Nuclear

- Signed on KRW 200B. contract for UK's 'Hinkley Point C' Nuclear PJT's equipment supply (Sep. '19.)
 - Established a bridgehead to enter the global new nuclear power market by nuclear power equipment supply contract
- Certified 'Nuclear Steam Generator Decontamination and Dissolution Technology' as a new technology by Korean Ministry of Trade, Industry and Energy (Sep. '19)
 - Innovative technology to minimize radiation exposure and radioactive waste and reduce labor's worktime

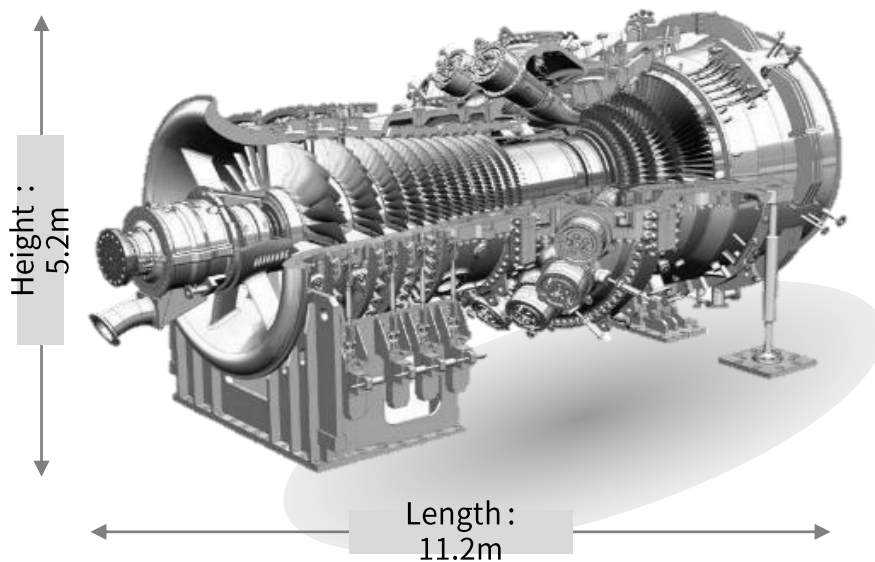
Others

- Signed on Indonesian 'Palu 3 Power Plant' equipment supply amounting to KRW 120B. (Sep. '19)
 - Bulk supply of the core equipment such as CFB, turbines, etc., corresponding to the strong natural environmental regulation standard

Localized Large Sized G/T for Power, the World's 5th Own Model

Secured the commercialized large sized G/T technology as 'The 1st in Korea, 5th in the World'

Secured Own Model (DGT6-300H S1)



•GT Performance :

Output 270MW / Efficiency 40% or more

•Combined Performance :

Output 400MW / Efficiency 60% or more

Expected Effect

1 Localized G/T by the self-reliance design

: Expect to replace Korean CCPP market, dependent on the import, with the localized G/T

: Established more than 230 Korean G/T cooperating sub-vendors

2 Expand and enter into the global G/T market

: Expand and enter into the global G/T market after securing the commercialized track records in Korea

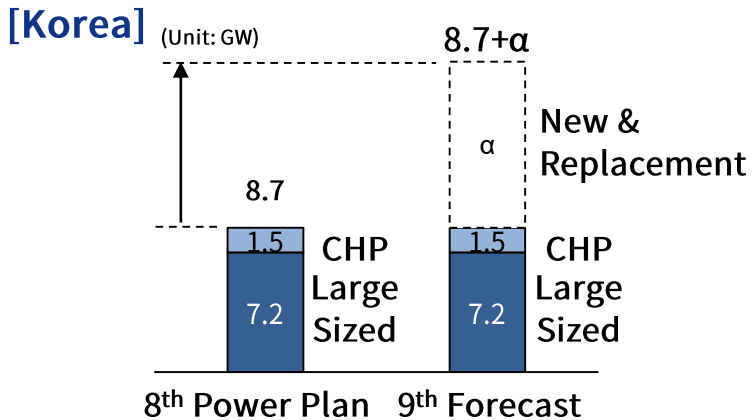


Doosan Heavy Industries & Construction

Import Replaceable Effect with Localized G/T Technology

Expect enormous import replacement effect with localized G/T thanks to new gas power volume's continuous growth

G/T market expenditure Forecast Korea



All of power plant's G/T depend on the imports

- All foreign company products (GE/MHPS, etc.)
- Purchasing Cost(149 Units) : **Expenditure of KRW 8.1T^{1,2)}**
- O&M Cost(for the past 25 years), etc.

Forecast the fixed volume of 8.7GW due to the 8th power supply plant + new & replacement³⁾ market expansion

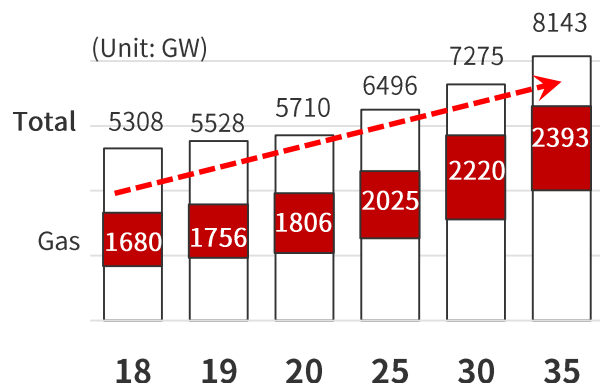
Overseas

Forecast overseas new gas power volume's continuous increase

- Forecast gas power's continuous demand increase to balance with new & replacement increase according to the global research firm⁴⁾

1) source: Power equipment volume (by power kinds) Jan. 1st, '18 Korea Power Exchange
2) Gas turbine world 2016-2017 Handbook Vol.32 pp 27-29
3) G/T required new CCPP after considering old CCPP and 1old coal-fired re-powering
4) US IHS Cambridge Labatory (CERA)

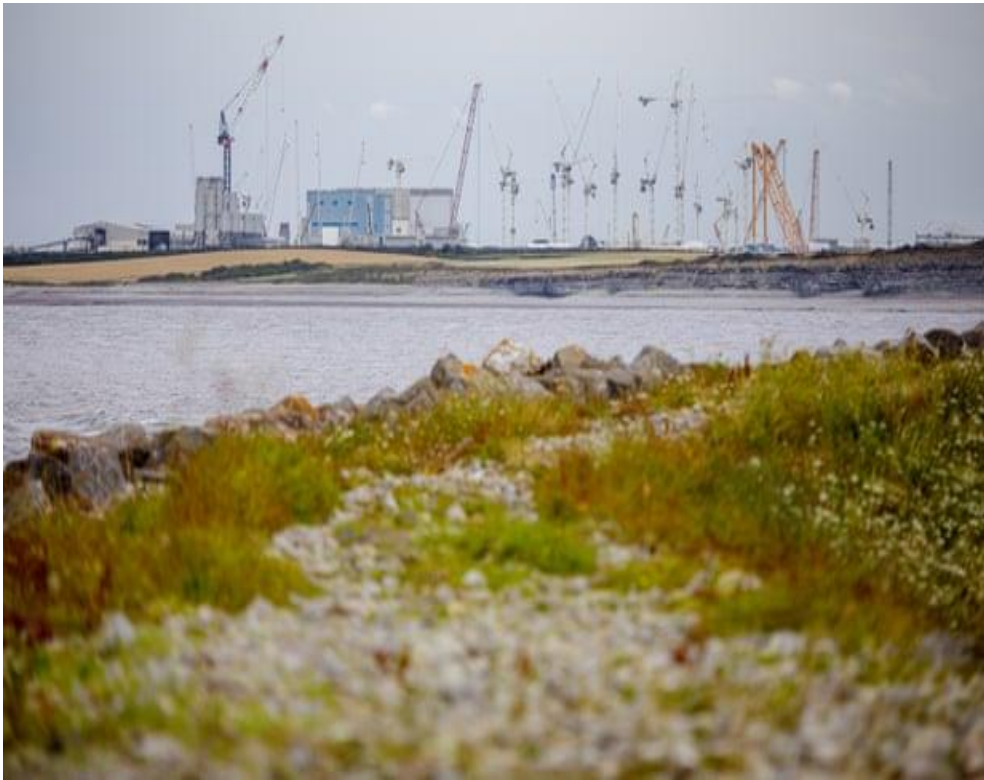
[Overseas⁴⁾]



Nuclear PJT Equipment Supply Contract

Doosan Babcock, UK based subsidiary, made a contract for 'Hinkley Point C' nuclear PJT equipment supply

Hinkley Point Nuclear Power Construction



< Hinkley Point Nuclear Power Construction Site >

'Hinkley Point C' Supply Contract

- J.V. with 4 companies such as Altrad, etc.
- Cooperatively awarded machinery, electrical measurement, cooperative equipment, etc.
- Amount: KRW 200B.
- Under construction in Somerset, UK for total 3,200MW and expect to complete by 2025

Status & Major Results

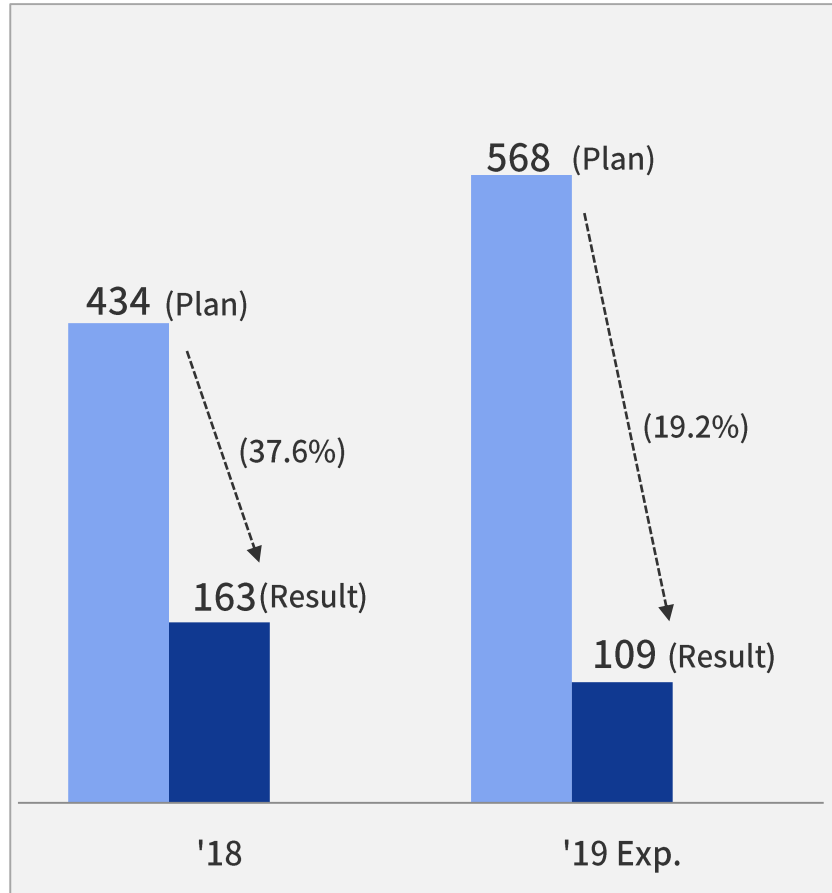
- Established a bridgehead to enter into the global new nuclear power market
- Active targeting at the existing and Operating nuclear service business

Order Plan & Results due to the 8th Power Development Plan

DHIC planned new & re-newable energy business related investment and orders, based on the 8th Power Development Plan. However, facing difficulty to achieve the plan due to low execution, etc. compared to the plan such as wind power, etc.

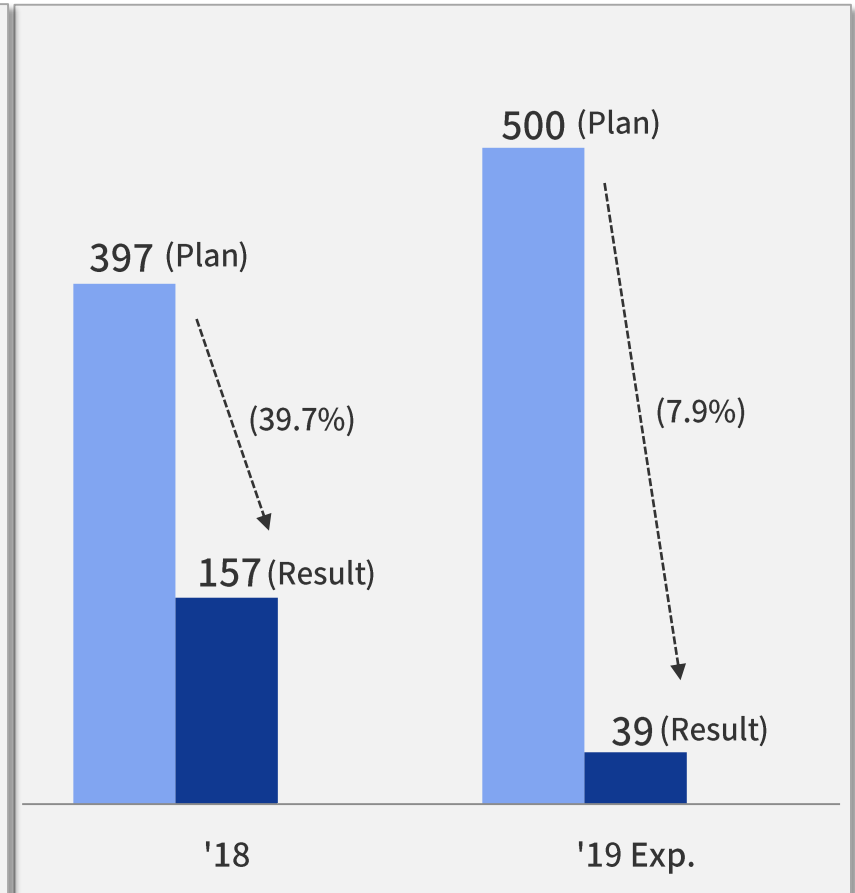
Total New & re-Newables

(Unit: KRW B.)



Wind Power

(Unit: KRW B.)



1) Electrical Power System Information System's wind power equipment volume by end of Sep. is under progress by 31.1% completed to the plan (Plan 4,752MW, Equip. Volume 1,422MW)

DHIC Parent_Summary

(Unit : KRW B., %)

	'18		'19		(YoY)	
	3Q	3Q (Accu.)	3Q	3Q (Accu.)	3Q Standard	Accu. Standard
Sales	881	2,847	799	2,615	-82	-232
OP	5	143	-47	63	-52	-80
OPM(%)	0.6%	5.0%	-5.8%	2.4%	-6.4%p	-2.6%p
Non-OP	-24	4	-31	-203	-7	-207
Interest	-49	-132	-38	-127	11	+5
FX	-6	-36	-10	-9	-4	+27
Other Non-OP	30	172	17	-67	-13	-239
Net P/L	-17	90	-120	-180	-103	-270

DHIC Parent_Balance Sheet

(Unit : KRW B.)

	'18	'19.2Q	'19.3Q	Against end of '18
Current Asset	3,330	3,728	3,814	+484
Cash & Cash Equivalent Asset	656	549	474	-182
Non-Current Asset	8,012	8,235	8,281	+269
Total Asset	11,342	11,963	12,095	+753
Total Liability	7,402	7,622	7,867	+465
Net Debt	3,769	4,308	4,637	+868
Total Equity	3,941	4,341	4,228	+287
Total Liability and Equity	11,342	11,963	12,095	+753
Liability Ratio	187.8%	175.6%	186.1%	-1.7%p

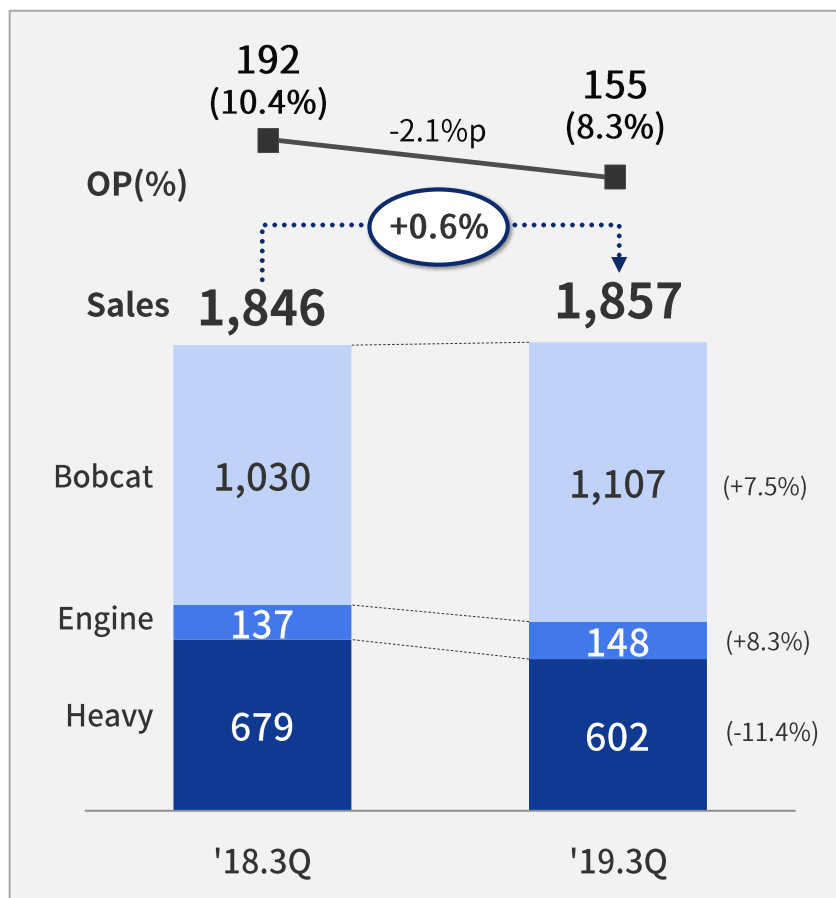
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Affiliates' Major Business Results_Doosan Infracore

Sales achieved level of the last year thanks to Bobcat & Engine business. OP decreased due to one-off cost such as new business investment, promotion cost increase, etc.

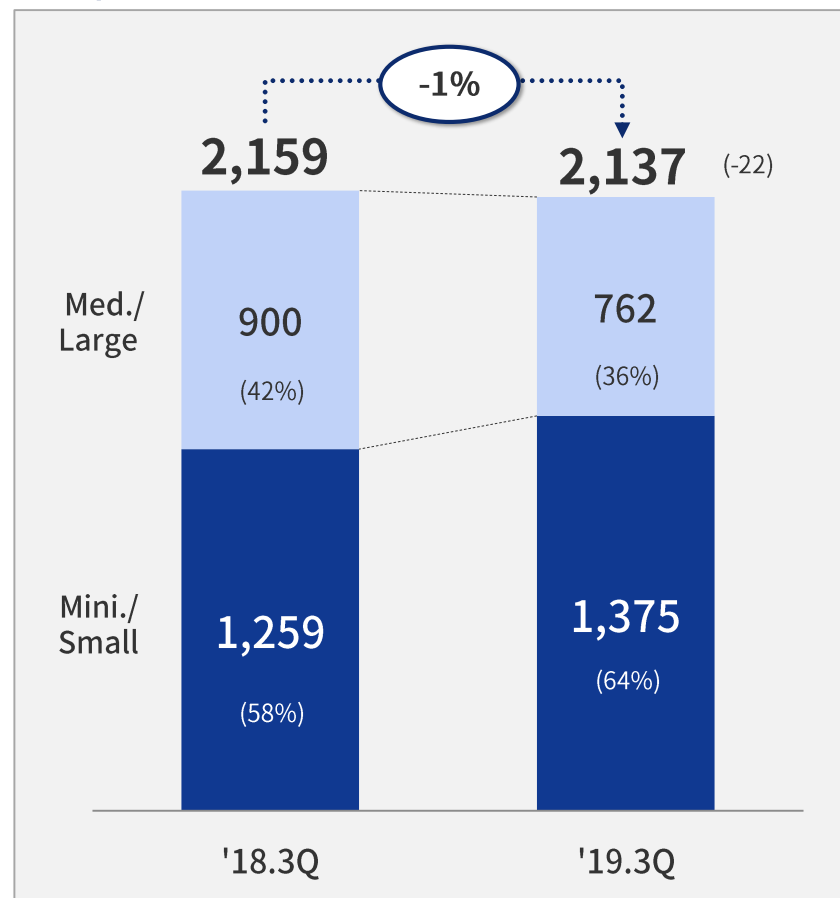
Sales/OP(%)

(Unit : KRW B.)



3Q Sales Vol. in China/Mix

(Unit : ea.)

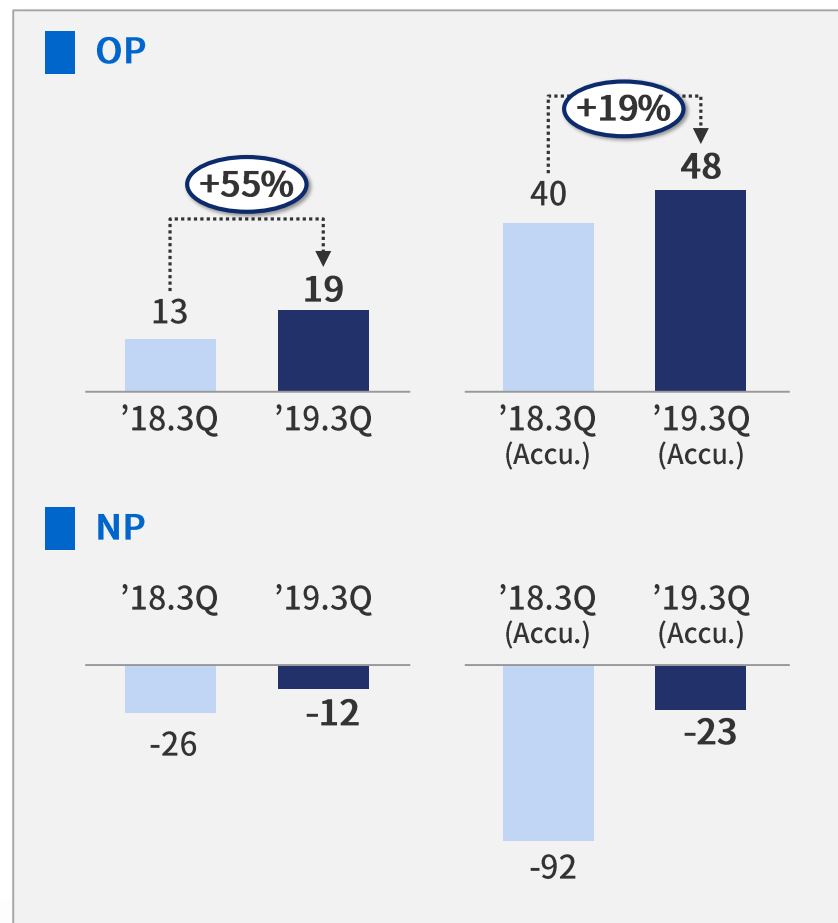


Affiliates' Major Business Results_Doosan E&C

OP increased by 55% thanks to sales increase and fixed cost reduction. Debt ratio stabilized thanks to capital increase, and interest coverage ratio achieved more than 1 time for 2 quarters consecutively due to interest cost reduction

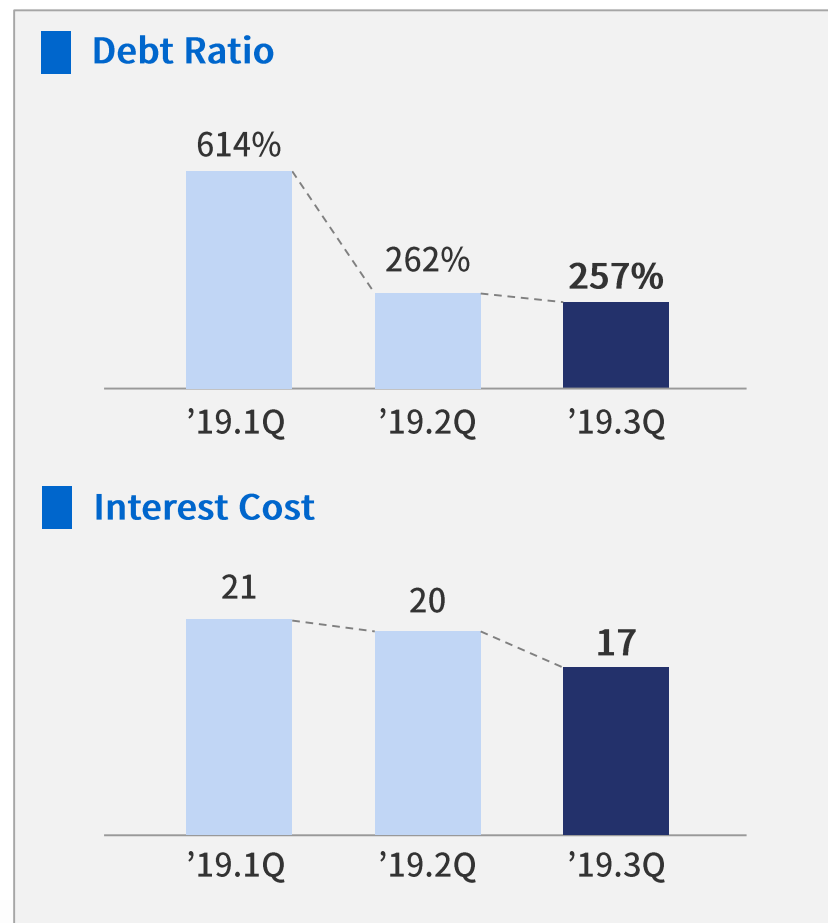
OP/NP

(Unit : KRW B.)



Financial Structure

(Unit : KRW B.)



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Consolidated_Summary

Back-up

3Q accumulated standard sales continue to increase YoY, OP decreased slightly (Unit: KRW B., %)

	'18		'19		YoY	
	3Q	3Q (Accu.)	3Q	3Q (Accu.)	3Q Standard	Accu. Standard
Sales	3,388	10,795	3,567	11,374	+179	+579
OP	207	880	139	847	-68	-33
OPM(%)	6.1%	8.1%	3.9%	7.4%	-2.2%p	-0.7%p
EBITDA	331	1,259	249	1,186	-82	-73
Non-OP	-116	-486	-115	-471	+1	+14
Interest	-121	-353	-106	-342	+15	+11
FX	-8	-39	4	13	+12	+51
Other Non-OP	13	-94	-13	-142	-26	-48
P/L before Corporate Tax	91	394	24	375	-67	-19
Corporate Tax (Profit)	44	186	86	219	+42	+33
P/L from Discontinued Operation	-2	-87	-11	12	-9	+99
Net P/L	46	121	-72	168	-118	+47



Consolidated_Balance Sheet

Back-up

(Unit: KRW B., %)

	'18	'19.2Q	'19.3Q	Against end of '18
Current Asset	9,782	10,511	10,451	+669
Cash & Cash Equivalent Asset	2,473	1,950	1,644	-829
Non-Current Asset	15,033	15,186	15,350	+317
Total Asset	24,815	25,697	25,801	+986
Total Liability	18,597	18,663	18,813	+216
Net Debt	8,357	8,814	9,465	+1,108
Total Equity	6,218	7,034	6,988	+770
Total Liability and Equity	24,815	25,697	25,801	+986
Liability Ratio	299.1%	265.3%	269.2%	-29.9%p



Q&A