Doosan Engine

Investor Relations

1Q16 Operating Results

April 2016
Doosan Engine

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Disclaimer

This presentation contains preliminary figures which may be materially different from the final figures.

While the statement in this presentation represent our current assumptions, plans and expectations, and we believe these judgments are reasonable, they are not guarantees of future performance and involve known and unknown risks, uncertainties such as FX & raw material costs, and other factors that may cause actual results to differ materially from the results, performance, achievements or financial position expressed or implied in this presentation.

This presentation is provided only as a reference material. Doosan Engine assumes no responsibility for investment decisions. We trust your decision will be based on your own independent judgment.

Income Statement

✓ Sales W165bn, Operating Profit W2bn

(Wbn)

	’16.1Q	’15.1Q	YoY	’15.4Q	QoQ
Sales	**165** ①	144	+14.8%	218	-24.2%
COGS ratio(%)	***(94.5%)***	*(100.6%)*	*(-6.1%p)*	*(101.7%)*	*(-7.2%p)*
Gross Profit	**9**	-1		-4	
SG&A	**7**	11		15	
Operating Profit	**2**	-12	TB	-19	TB
OP margin(%)	***(1.0%)*** ②	*(-8.2%)*		*(-8.5%)*	
Interest income & expense	**-3.5**	-2.6		-3.5	
Other gain & loss	**-1.1**	3.3		-96.2	
Gain/Loss on Equity method	**7.7** ③	0.8		-3.6	
Pretax Profit	**5**	-10	TB	-122	TB
Tax	**-0**	-2		-26	
Net Profit	**5**	-8	TB	-96	TB

1Q Key Features (YoY)

① Sales +14.8% YoY

- Sales improved thanks to the increase of marine engine deliveries

② OP Margin 1.0%

- Improvement of Product Mix
  (COGS ratio: 1Q15 100.6% → 1Q16 94.5%)
- Decrease of SG&A expense -W4bn YoY

③ Gain/Loss on Equity method W7.7bn

(Wbn)		’15.1Q	’15.4Q	’16.1Q
Bobcat	DII	6.8	5.0	5.3
	DHEL	-6.1	-8.5	2.4
		0.7	-3.5	7.7
DSD		0.1	-0.6	0

Balance Sheet

✓ Net Debt W284bn, Net Debt ratio 48.1%

(Wbn)

	’15.12	’16.03	+/-
Current Assets	450	473	23
Non-current Assets	956	980	24
Total Assets	**1,406**	**1,453**	47
Current Liabilities	530	567	37
Advance Receipts	*273*	*282*	*9*
Non-current Liabilities	301	295	-6
Total Liabilities	**831**	**862**	31
Paid-in Capital	69.5	69.5	0
Capital Surplus	367	367	0
Retained Earnings	175	178	3
Accumulated other comprehensive income	-37	-24	13
Total Equities	**575**	**591**	16
Net Debt ratio	47.4%	48.1%	+0.7%p

Net Debt

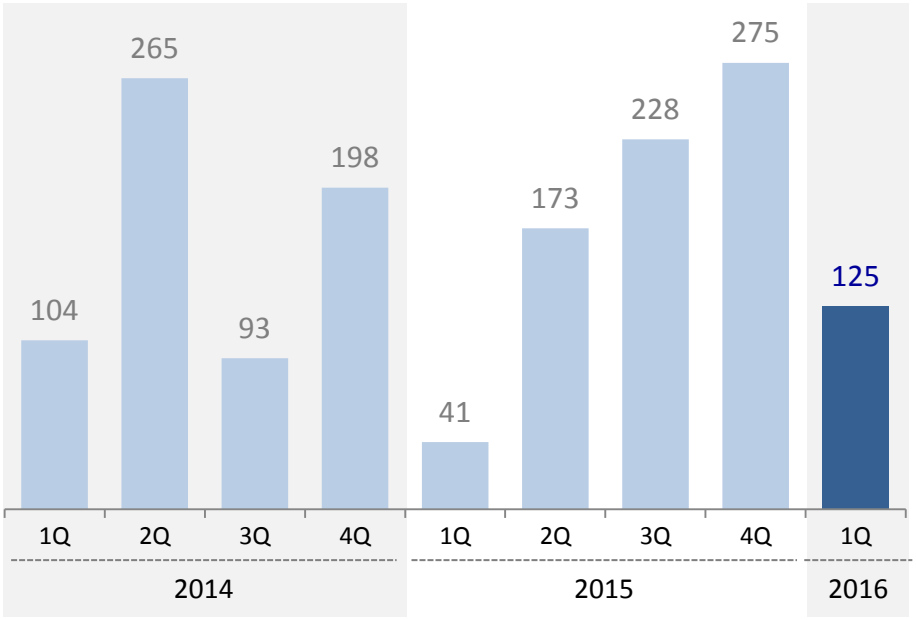
(Wbn)	’15.12	’16.03	+/-
Gross Debt	335	379	+44
Cash & Cash Equivalents	63	95	+32
Net Debt	272	284	+12

New Orders

✓ 1Q New Orders: W125bn

Quarterly New Orders Trend

(Wbn)



※ New Orders: based on receiving Advance Receipts

1Q New Orders by Customers

(Wbn)

Category		Amount
Marine	SHI/DSME	50
Engine	Domestic others	30
	China	33
	Oversea others	1
	sub-total	114
Diesel Power Plant		0
SCR		3
Engine parts & C/S		8
Total		125

Order Backlog

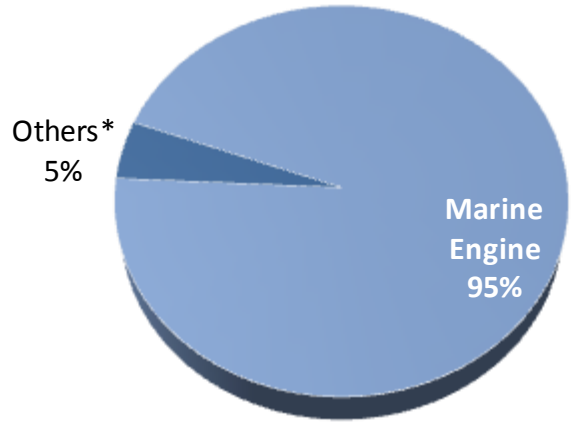
✓ Order Backlog: W2.0tn, Marine Engine accounts for 95%

Order Backlog Breakdown

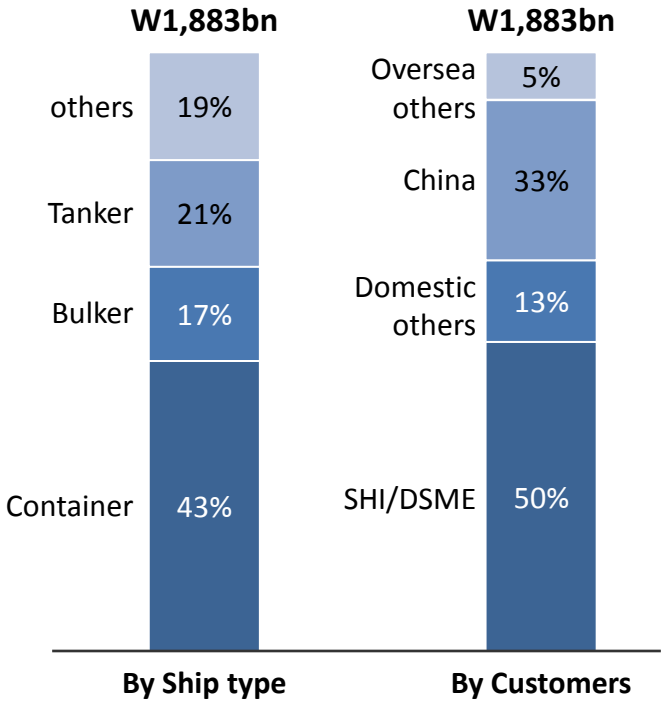
(Wbn, %)

W1,978bn

(as of Mar. 2016)



Marine Engine
(2 & 4-stroke)
: W1,883bn



* Others: Diesel Power Plant, SCR

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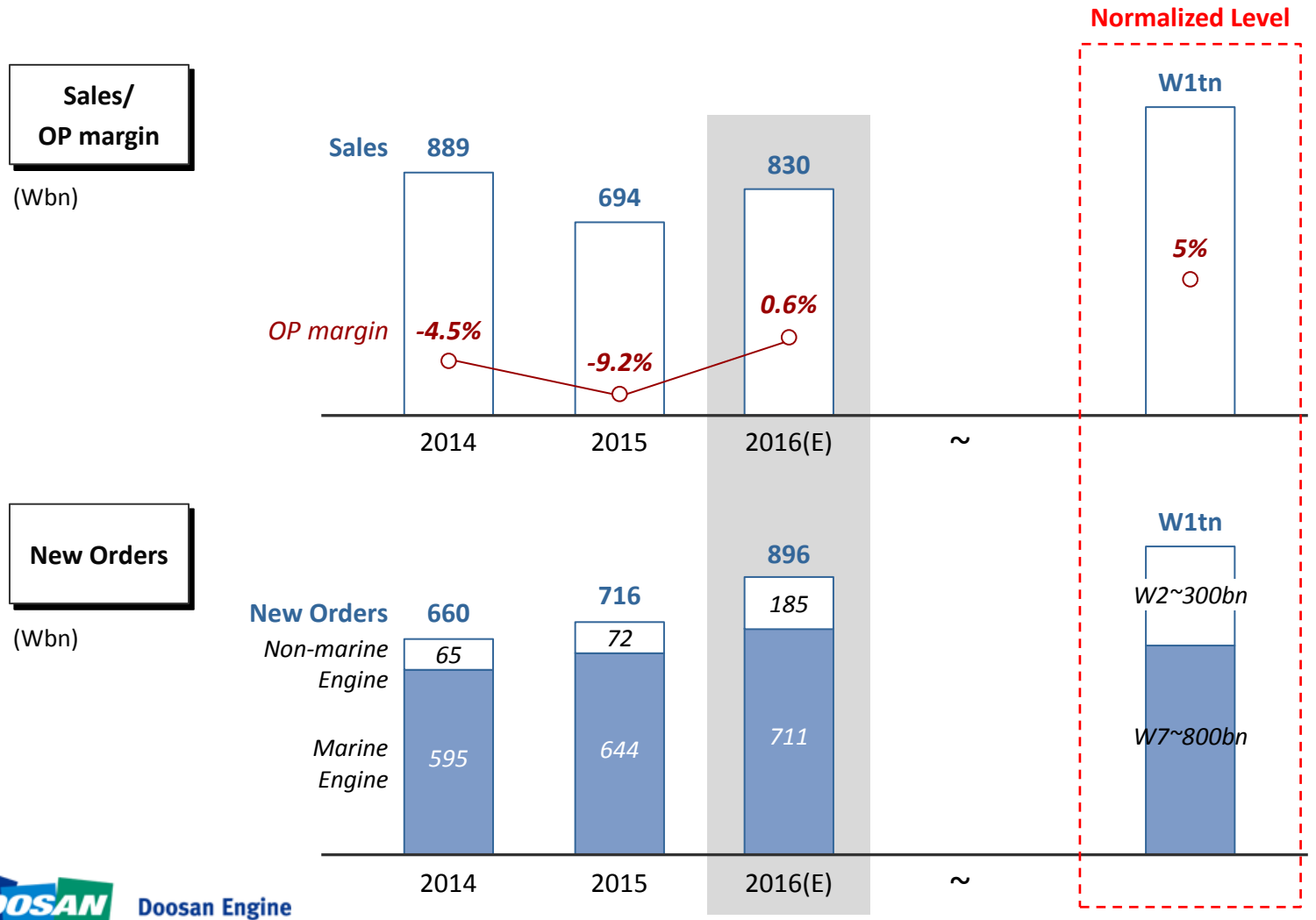
Guidance

✓ 2016 Sales W830bn, OP margin 0.6%

✓ Mid-to-long term Order and Sales target is W1tn maintaining 5% of OP margin sustainably

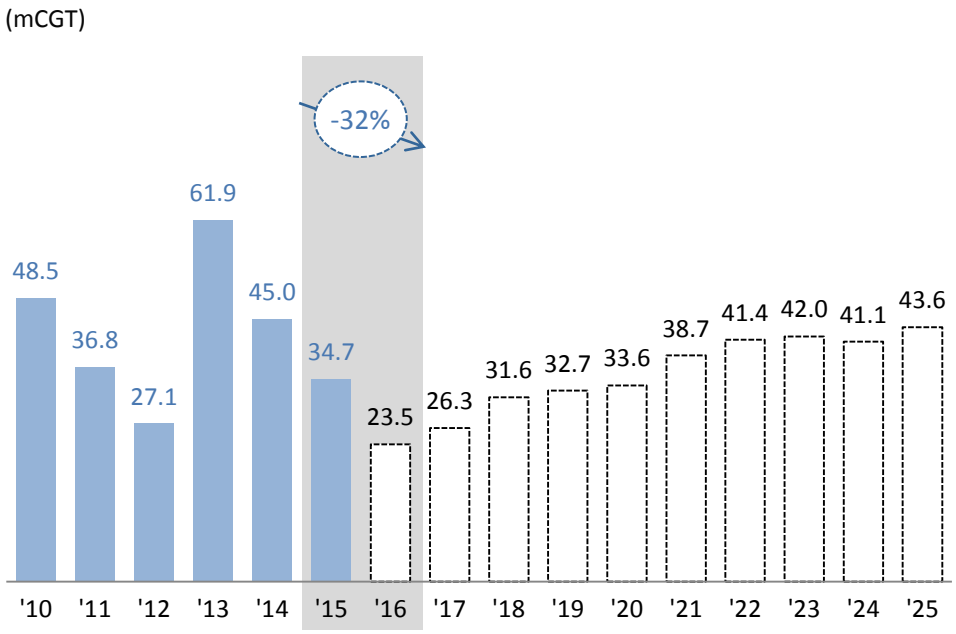


Doosan Engine

Shipbuilding Market Outlook

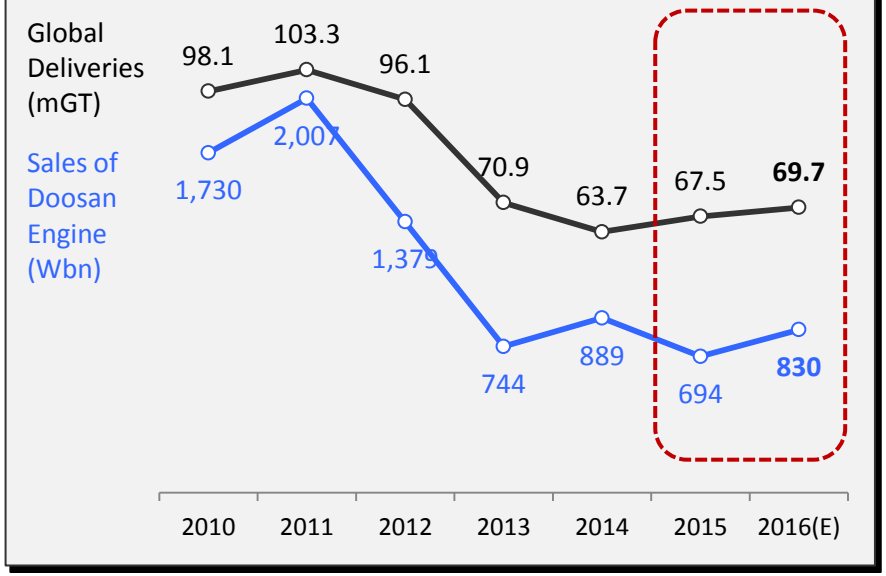
✓ Ship deliveries are expected to grow in 2016, while new orders are likely to decrease

Global New Orders Outlook



※ Source : Clarkson Forecast Report (March 2016)

Number of global deliveries and Doosan Engine's sales are highly co-related



※ Source : Clarkson Forecast Report (March 2016)

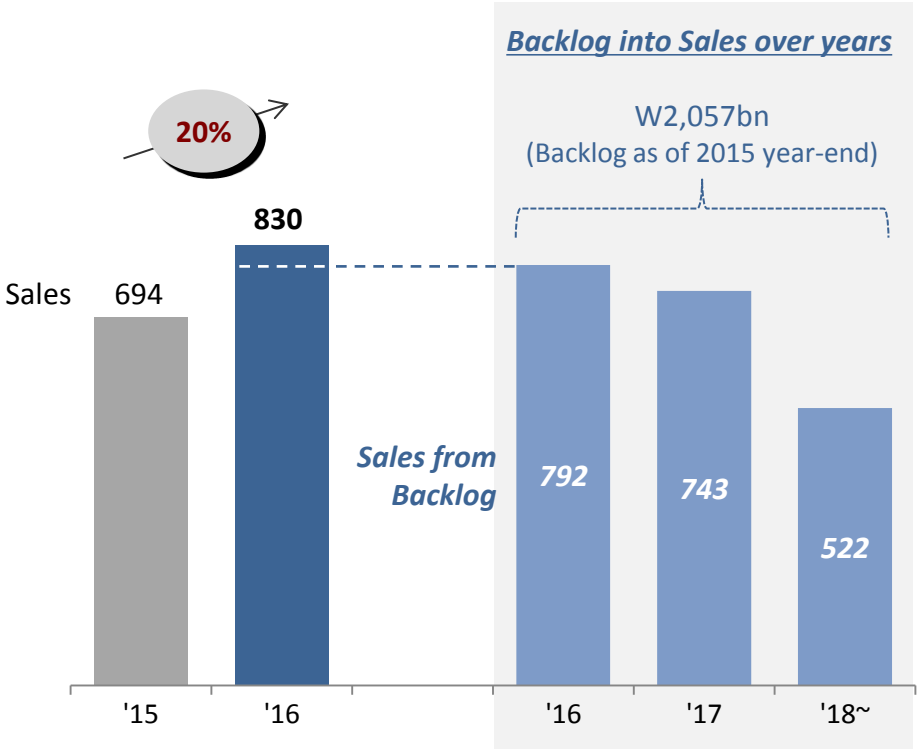
Investment Points 1. Sales growth and more profitable product mix increase in sales

✓ 95% of sales in 2016 is generated from the backlog be the end of 2015

✓ Engines for LNGC will begin to delivery in the 2H 2016. Based on its higher profitability than other types, it will contribute to profitability improved

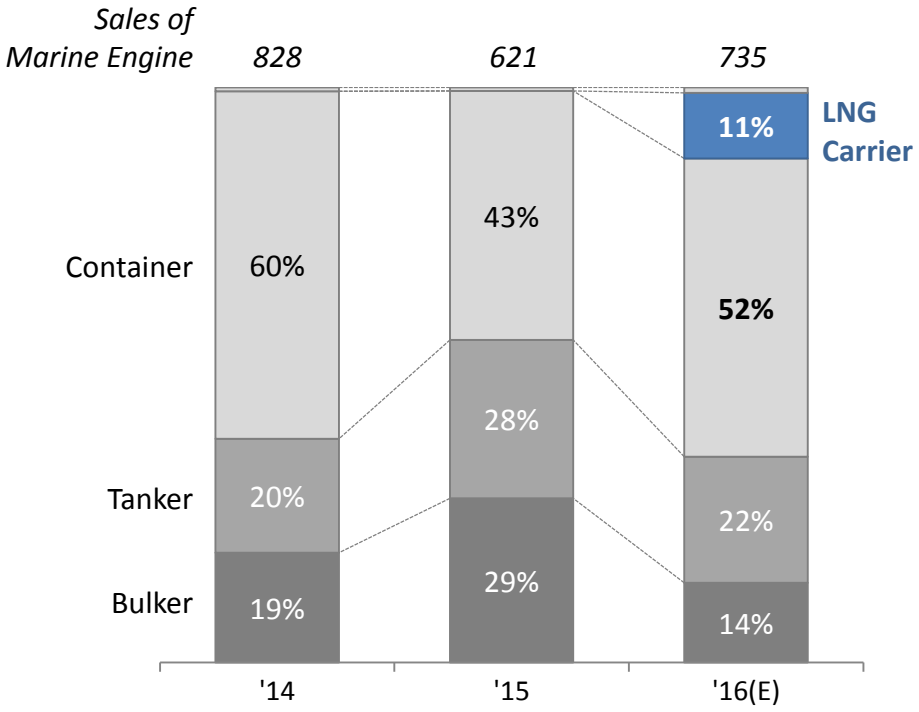
Sales for 2016 is highly visible

(Wbn)



Marine Engine Sales Trend (by ship type)

(Wbn, %)

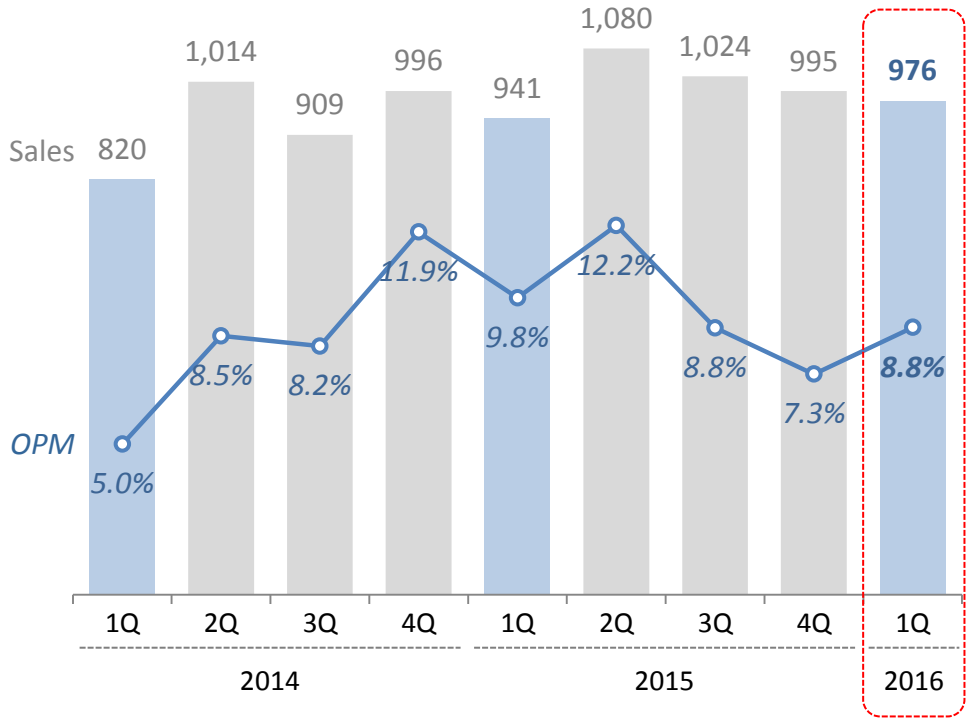


Investment Points 2. Value of Bobcat

✓ Doosan Bobcat: 1Q Sales W976bn, OP margin 8.8%

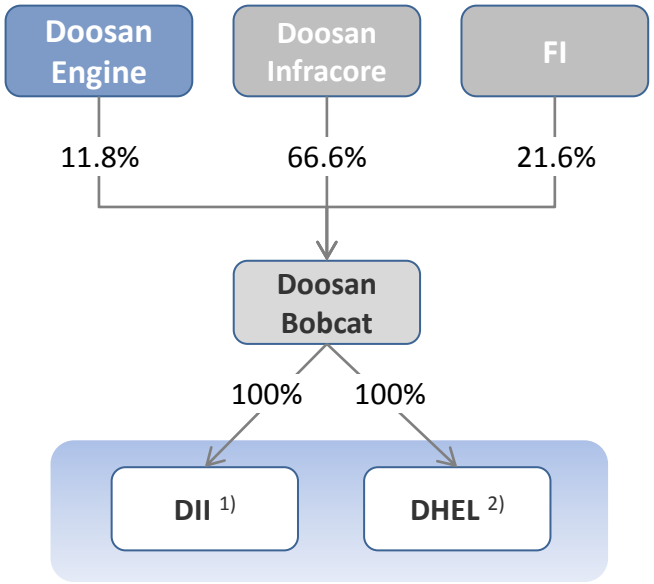
Doosan Bobcat Earnings Trend (Quarterly)

(Wbn)



Ownership Structure of Bobcat

(%)



1) DII: Doosan Infracore International, Inc. (US)
2) DHEL: Doosan Holdings Europe Ltd. (Ireland)

IMO Regulation : NOx

NOx (Nitrogen Oxides)

Global as Tier II | after Jan. 2011		**ECA as Tier III** | after Jan. 2016	
Under	**14.4 g/kWh**	Under	**3.4 g/kWh**

ECA (Emission Control Areas) by MEPC[1)]

MEPC 66th decided to keep the implementation date of the NOx Tier Ⅲ requirements as of 1st January 2016.

• **NOx ECA** : North American area including US Caribbean sea

For any future new ECA, the Tier Ⅲ requirement will be made mandatory for ships constructed on or after the announcement of the establishment of the ECA, or any date decided by the parties proposing the ECA but not earlier than the announcement date.

1) MEPC : Marine Environment Protection Committee

Investment Point 3. SCR (1/2)

✓ After the first order of SCR in Oct. 2014, inquiries for SCR orders are increasing

✓ Pricing for SCR will be around 15~20% of engine price

SCR (Selective Catalytic Reduction)

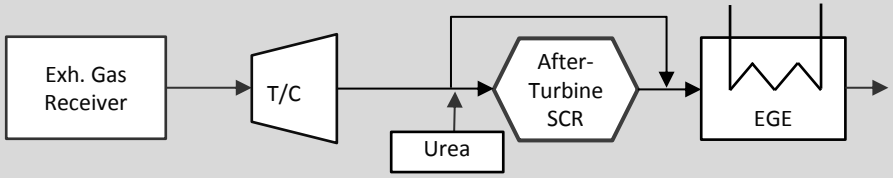
- NOx reduction method using catalyst and reactant(urea)
- High NOx reduction efficiency (≥80%)
- Consist of Reactor, Urea Dosing System, Control System

"Most effective and proven solution"

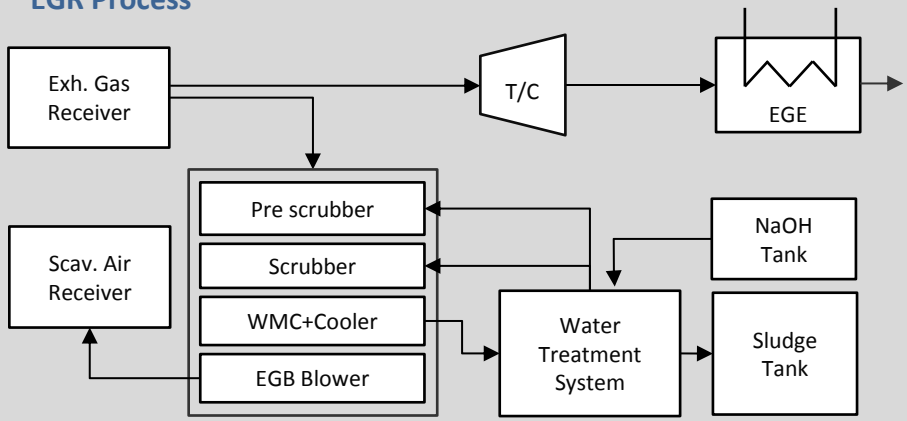
EGR (Exhaust Gas Recirculation)

- NOx reduction by decreasing O_2 concentration of scavenge air
- Engine integrated + additional equipment
- More complex design

* DelNOx Process



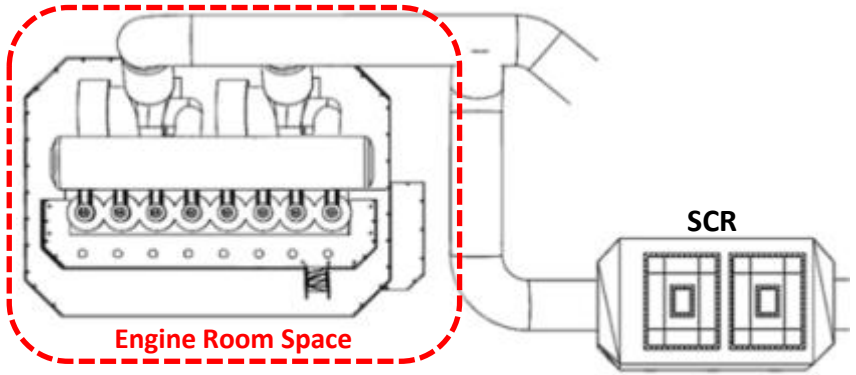
* EGR Process



Investment Point 3. SCR (2/2)

After-turbine SCR vs. Pre-turbine SCR

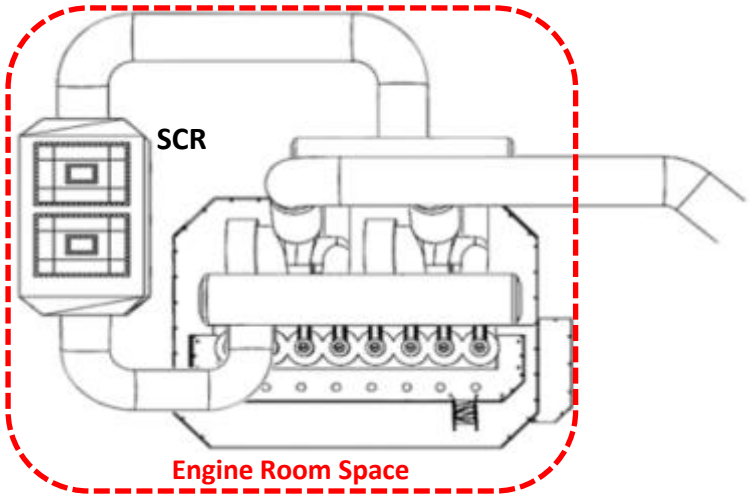
After-turbine SCR (LP)



- Located after Turbocharger
- Flexible arrangement in engine room and simple piping line
- Minimized modification of engine room design

" Best Solution for IMO Tier Ⅲ Compliance, Shipyard Design & Ship-owner Operation "

Pre-turbine SCR (HP)



- Located between Exhaust gas receiver and Turbocharger
- Limited arrangement in engine room and complex piping line
  - Must be arranged near the main engine
  - Influenced by number of turbochargers
- Influence on engine room design

Appendix

I. Company overview

II. History

III. Plants

IV. Manufacturing infrastructure

V. Business areas

VI. IMO Environmental Regulations

VII. Doosan Group IR contact point

Appendix 1. Company Overview

Overview

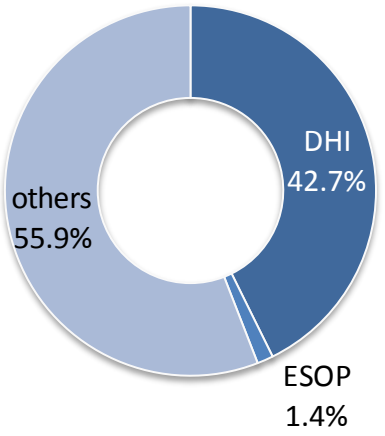
Company	Doosan Engine Co., Ltd.
Date of Foundation	Dec. 30, 1999
Address	Sinchon-dong 69-3, Seongsan-gu, Changwon-si, Gyeongnam
Business	Marine diesel engines / Diesel engines for power plants
Exports	Local/direct Exports(96%), Domestic(4%)
Capital	W69.5bn
No. of Employees	833 [As of Dec. 2015]
Subsidiary	Doosan Marine Industrial (DMI) Dalian Co., Ltd. (100% owned)

Business Areas

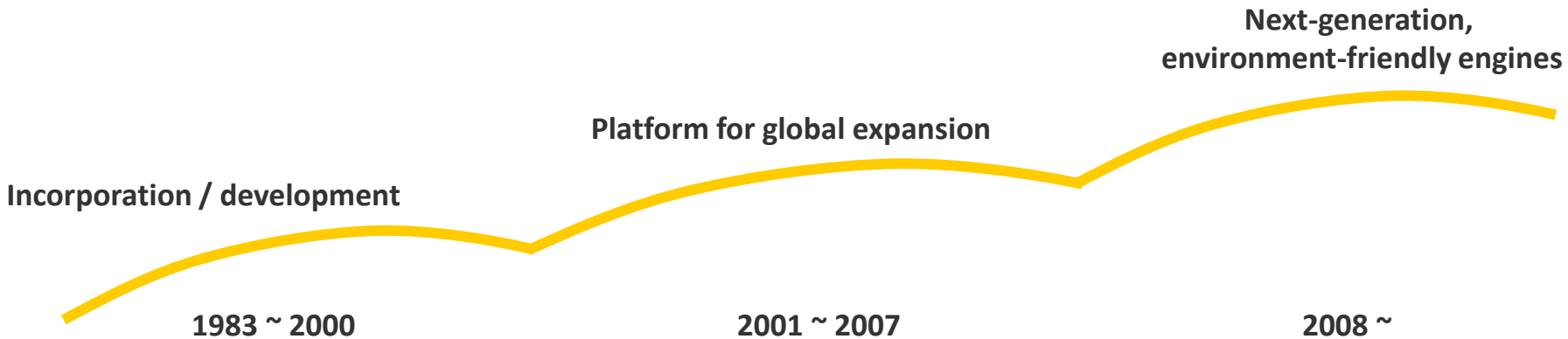
Business Areas	Sales (2015)	% of sales
2-stroke engine	W528bn	76%
4-stroke engine	W93bn	13%
Diesel power plant	W24bn	4%
Engine parts & C/S	W49bn	7%
Total	W694bn	100%

Shareholders

[As of 2015.12.31]



Appendix 2. History



1983
- Doosan Heavy Industries launches engine business

1994
- Samsung Heavy Industries(SHI) launches engine business

1999
- Doosan Heavy Industries(DHI) and SHI agree to establish a JV, HSD Engine

2000
- HSD Engine establishes R&D center
- Capital Increase of W25bn (DSME participated)

2001
- Signs business transfer agreement with DHI, on internal combustion generators

2002
- Receives WCP (world class product) award from the Ministry of Commerce, Industry & Energy for its large diesel engines

2005
- Changes company name to Doosan Engine Co., Ltd.

2006
- Establishes DMI in China, and builds plants

2007
- Receives US$1bn Export Tower Award

2008
- Constructs additional assembly line and 4-stroke engine production line
  - Capacity : 2-stroke(12mn HP) and 4-stroke (500 units p.a.)

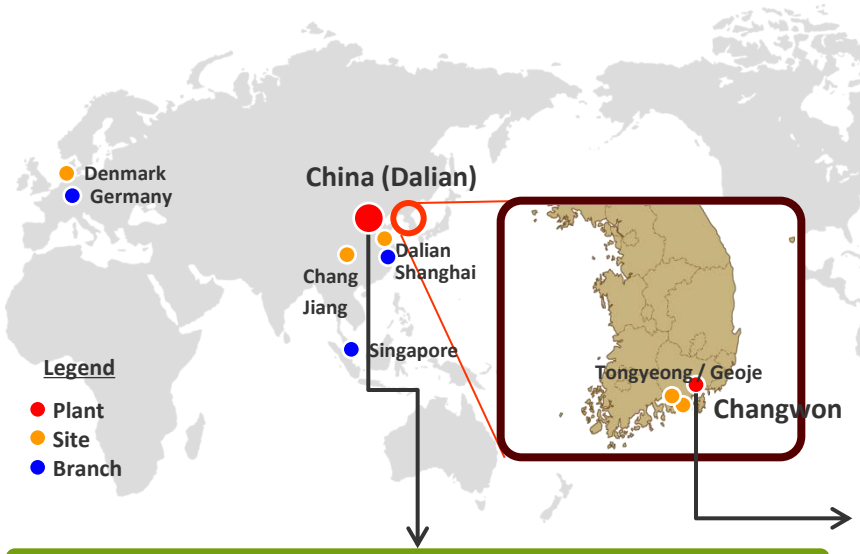
2009
- Capital Increase of W33bn (Placement on shareholders, ESOP)

2011
- IPO listing in KRX (2011. 1. 4)

2012
- Achieves cumulative production of 80mn HP within shortest period(Jan. 2012)

2013
- Commercialization of ME-GI engine (Mar. 2013)

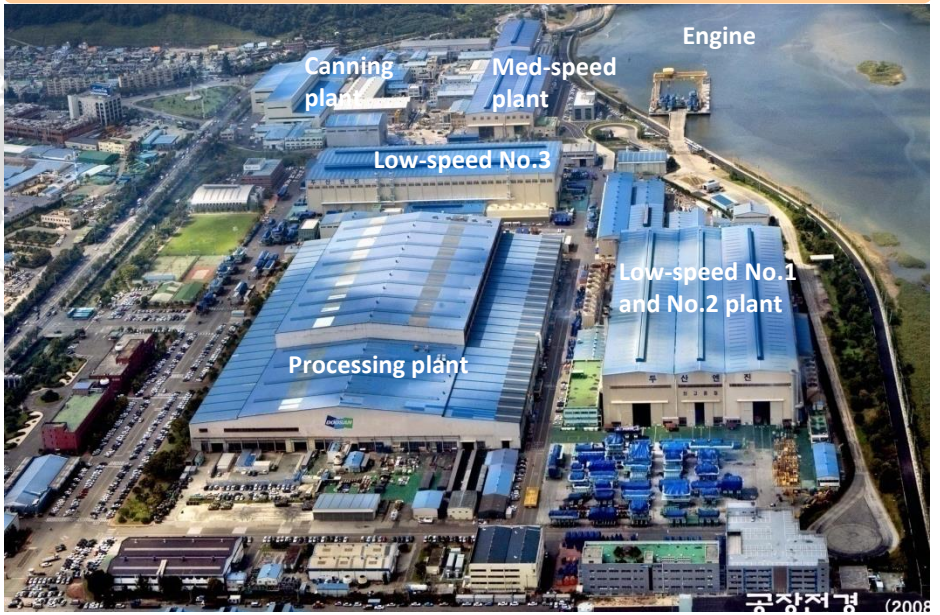
Appendix 3. Plants



Dalian, China plant

- Size : 57,904㎡
- Product line-up : Diesel engine parts
- Production capacity : 250 blocks of engine canning parts

Changwon Plant (Headquarter)

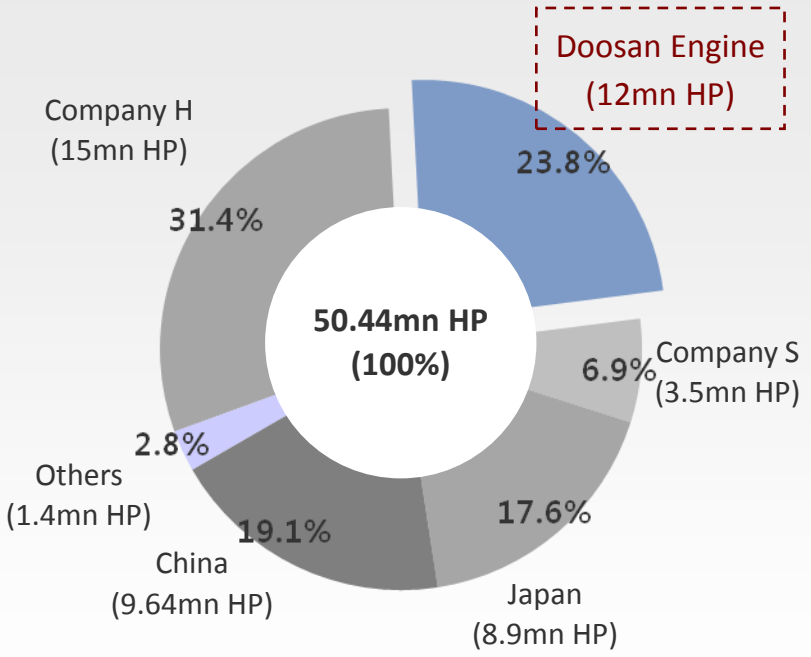


- Products : Diesel engines
- Size : 328,000㎡
- Overview

Classification	Size(㎡)	Production CAPA (per year)
2-stroke engine plants	42,720	12,000,000 HP
4-stroke engine plant	17,010	2,000,000 HP
Processing plant	27,100	
Canning plant	4,894	
Total Capacity		**14,000,000 HP**

Second largest diesel engine production facility in the world

2-stroke diesel engine production Capacity



Note : Estimates based on each company's 2010 annual report

Production facilities and infrastructure

1. 2-stroke diesel engine plant

- Production capacity : 12mn HP
  (Operating in 6mn HP)
- Assembly and testing plants
- Processing plant (7 Plano Millers, 8 Boring Mch.)
- Canning plant(250 blocks/year)

2. 4-stroke diesel engine plant

- Production capacity : 500units
- Assembly and testing plants
- Processing plant (5 Plano Millers, 4 Mill-Turns)

3. Top-of-line production infrastructure

- High-quality supply chain
  (Quality/stable procurement and joint R&D)
- Cutting-edge production system
  ("Flow production", "fool-proof" system)
- Skilled design and production workforce

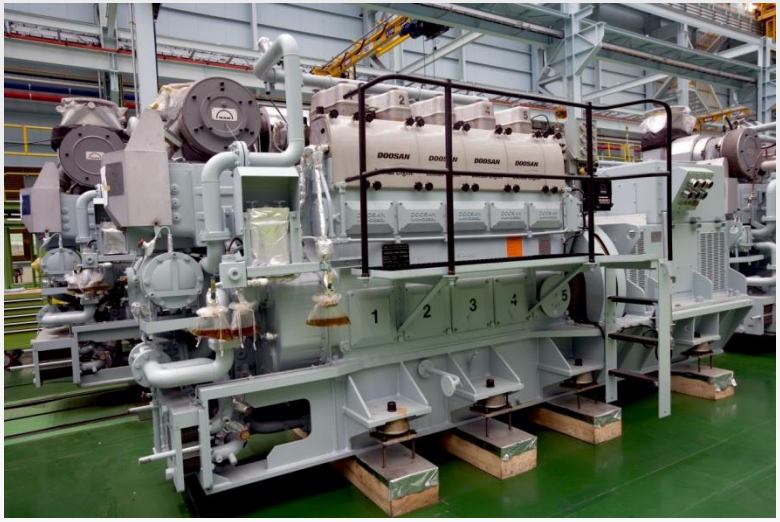
Appendix 5. Business Area : 2-stroke diesel engine

2-stroke diesel engine

- Main Business (76% of total sales in 2015)
- Uses : Large vessels
  (e.g. Container, Tanker, Bulker, LNG carriers)
- Market position : No.2 globally, with 24% m/s
- Customers : SHI, DSME, Yangzijiang(China)
  Sinopacific(China), COSCO(China)

Appendix 5. Business Area : 4-stroke diesel engine

4-stroke diesel engine



- New growth business (13% of total sales in 2015)
- Uses : Auxiliary engines in large ship engines,
  Propulsion engines in small to mid-sized ships
- Customers : SHI, DSME, China, Brazil

Appendix 5. Business Area : Power plants (2 & 4-stroke)

Diesel Power Plant

4-stroke Diesel Power Plant

- 4-stroke diesel power plant engine
- Generates 1~25MW power suited for small capacity power plant
- Installed in small islands or remote areas and used for emergency purpose

(Philippines, Fujairah, Bangladesh)

EDG* for Nuclear Power Plants

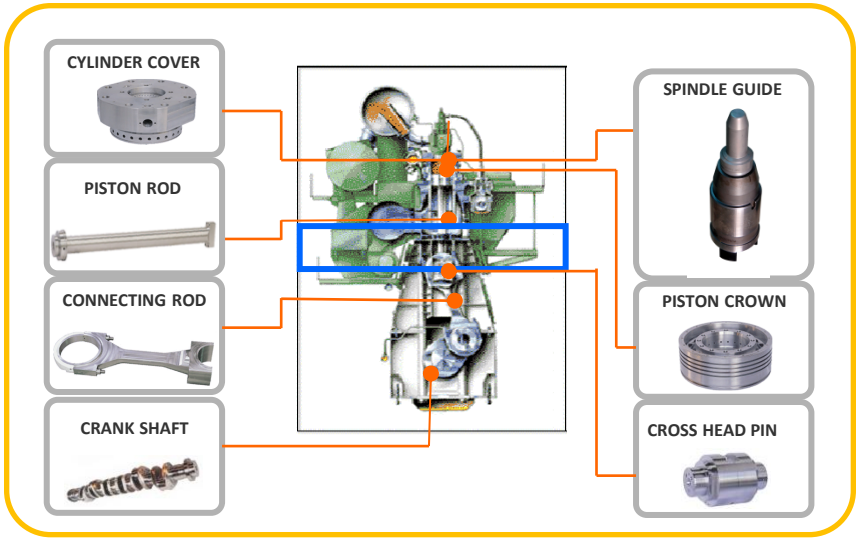
No.1 supplier of emergency generators for nuclear power plants

- Exclusive supplier of emergency generators for nuclear power plants in Korea; Orders to grow from rise in nuclear power plant exports
- Generates power capacity of 3,500 ~ 9,000KW
- Supplied to the major nuclear power plants in Korea

* EDG(Emergency Diesel Generator): a diesel-powered emergency backup systems for nuclear power plants

Appendix 5. Business Area : Parts & C/S

Main engine parts



- Uses : Ship engines, Retrofit
- Customers :
  - 14 agencies (12 domestic, 2 overseas)
  - Ship owners: A.P.Moller(Denmark), CSCL(China), NOVO Ship(Russia)
- Market size : W600bn(as of 2013)
- Business overview
  - Domestic production of engine parts
  - Developing paid A/S items

CYLINDER COVER

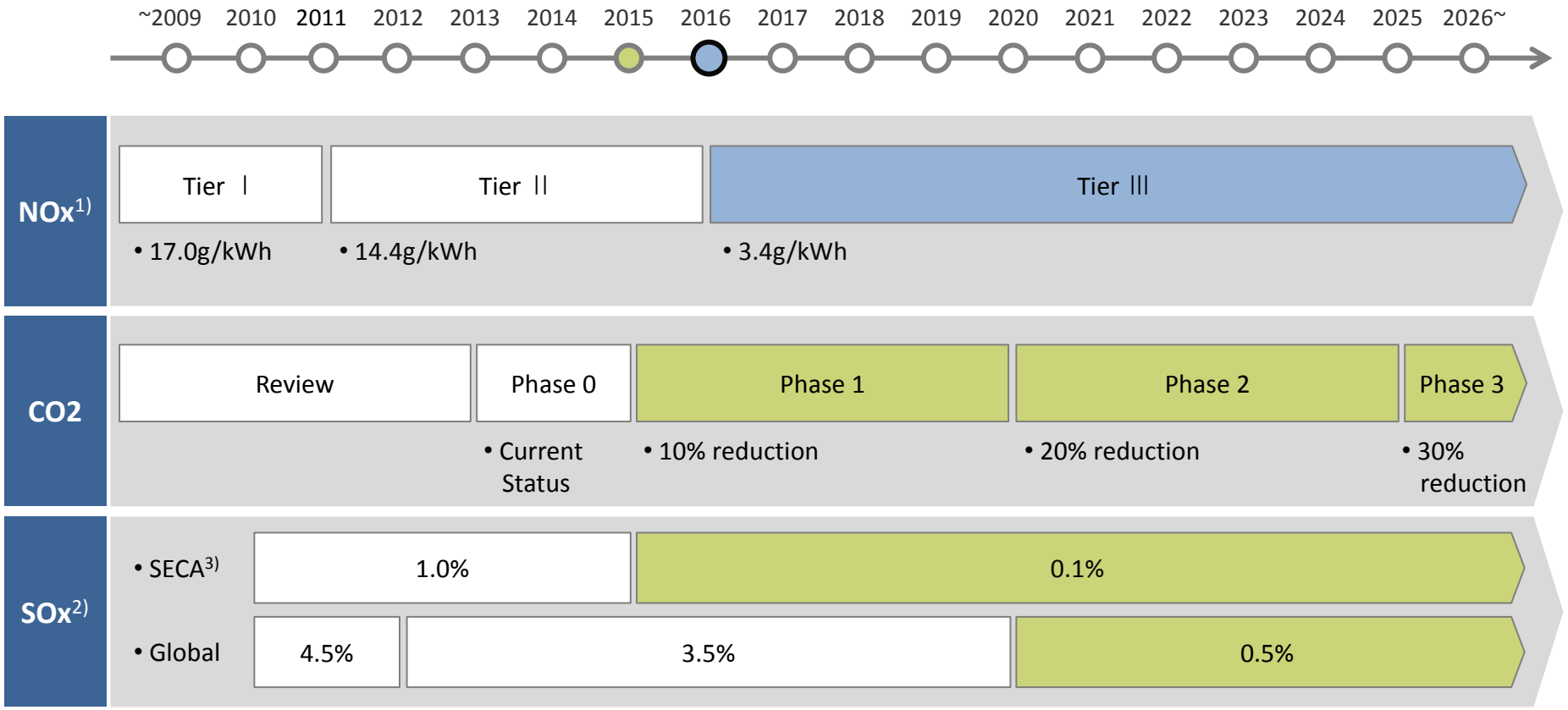
ROD(CON/PISTON)

ALPHA RETROFIT

CROSS HEAD PIN

Appendix 6. IMO Environmental Regulation

IMO Regulation Milestone



1) NOx : Nitrogen Oxides
2) SOx : Sulphur Oxides
3) SECA(SOx Emission Control Area): Baltic Sea, North Sea, North American area including US Caribbean sea

Appendix 7. Doosan Group IR contact Point

For further information about our company or affiliates, please contact us at the following.

Company	Name	Phone	E-mail
Doosan Engine	**Mr. LIM Taewoo**	**82-2-519-5876**	**taewoo.lim@doosan.com**
Doosan Corp.	Ms. LEE Jiwon	82-2-3398-1248	jiwon4lee@doosan.com
Doosan Heavy	Ms. WON Youngsoo	82-2-513-6789	youngsoo.won@doosan.com
Doosan Infracore	Ms. OH Hyunji	82-2-3398-8416	hyunji.oh@doosan.com
Doosan E&C	Ms. LEE Hayoung	82-2-510-3896	hayoung.lee@doosan.com