

Security Code

Tokyo 5020

Supplementary Information

~ JX Group A to Z ~

February 4, 2015



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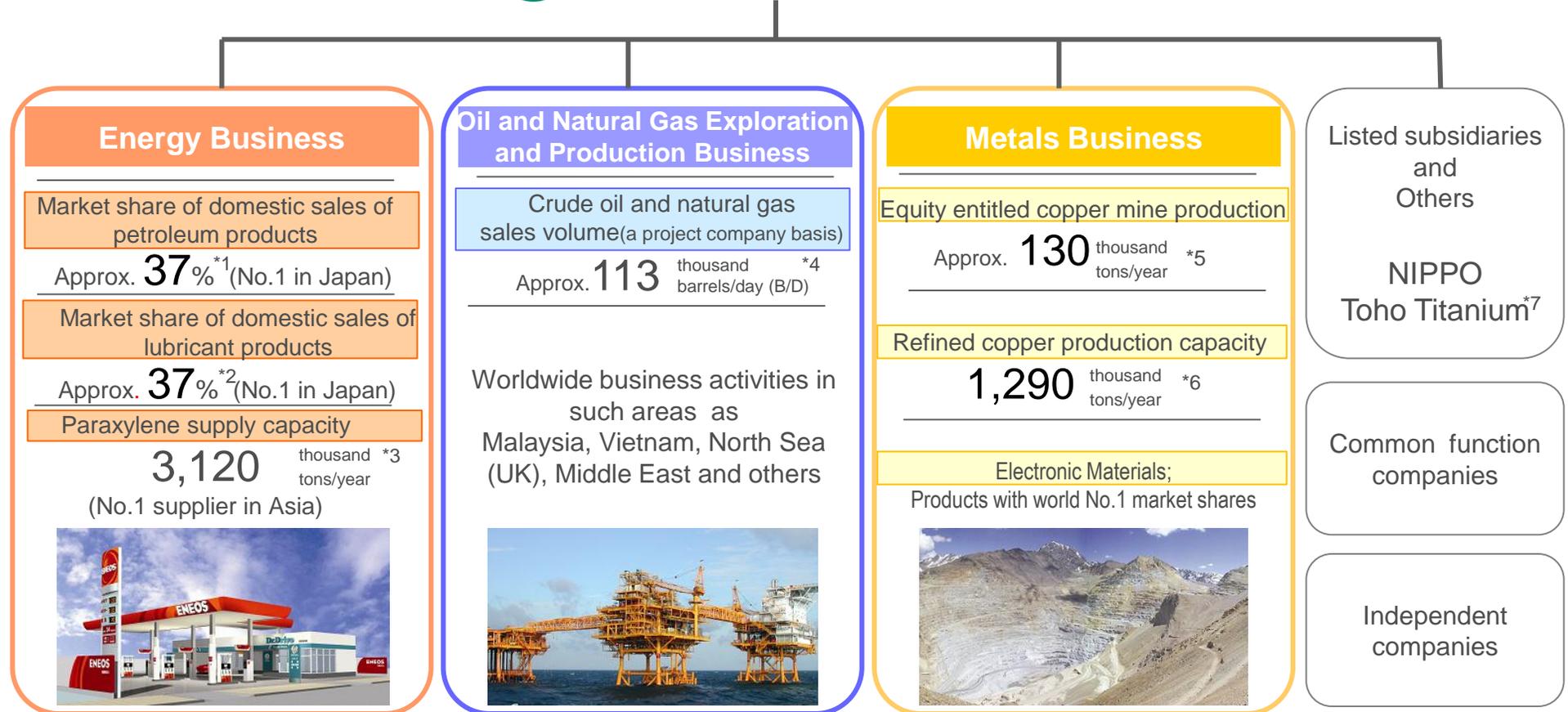


Summaries of businesses and Financial Results



Summary of JX Group's Businesses

JX JX Holdings, Inc.



Energy Business

Market share of domestic sales of petroleum products

Approx. **37%**^{*1} (No.1 in Japan)

Market share of domestic sales of lubricant products

Approx. **37%**^{*2} (No.1 in Japan)

Paraxylene supply capacity

3,120 thousand^{*3} tons/year

(No.1 supplier in Asia)



Oil and Natural Gas Exploration and Production Business

Crude oil and natural gas sales volume(a project company basis)

Approx. **113** thousand^{*4} barrels/day (B/D)

Worldwide business activities in such areas as Malaysia, Vietnam, North Sea (UK), Middle East and others



Metals Business

Equity entitled copper mine production

Approx. **130** thousand^{*5} tons/year

Refined copper production capacity

1,290 thousand^{*6} tons/year

Electronic Materials;
Products with world No.1 market shares



Listed subsidiaries and Others

NIPPO
Toho Titanium^{*7}

Common function companies

Independent companies

*1 FY2013 actual

*2 FY2013 actual

*3 As of Dec. 2014

*4 Crude oil equivalent (average daily production from Jan. to Sep. 2014 actual)

*5 Equity entitled copper production contained in copper concentrate (CY2013 actual)

*6 Pan Pacific Copper (66.0% equity stake) ; 610 thousand tons/year + LS-Nikko Copper (39.9% equity stake) ;680 thousand tons/year (As of Dec. 2014)

*7 Profit and loss of Toho Titanium is included in the Metals Business.



Financial Summary

(JPY billion)	FY2013			FY2014		
	1H	3Q (Apr.-Dec.)	Full Year	1H	3Q (Apr.-Dec.)	Full Year
	Actual	Actual	Actual	Actual	Actual	Forecast (Feb. 2015)
Net Sales	5,777.7	9,003.6	12,412.0	5,442.4	8,343.6	10,870.0
Energy	5,009.2	7,809.5	10,755.0	4,617.0	7,075.1	9,120.0
Oil and Natural Gas E&P	94.1	147.0	202.2	104.4	161.5	220.0
Metals	506.5	766.7	1,039.1	550.0	842.0	1,150.0
Others	167.9	280.4	415.7	171.0	265.0	380.0
Operating Income (Loss)	139.4	201.7	213.7	14.3	(205.4)	(275.0)
Energy	80.7	99.7	79.9	(46.9)	(306.0)	(413.5)
Oil and Natural Gas E&P	42.6	68.2	83.4	34.1	52.6	67.5
Metals	5.8	11.6	13.8	11.2	23.0	33.0
Others	10.3	22.2	36.6	15.9	25.0	38.0
Ordinary Income (Loss)	176.1	255.9	302.3	42.0	(171.5)	(210.0)
Energy	91.4	112.6	108.2	(35.3)	(294.9)	(385.0)
Oil and Natural Gas E&P	53.1	81.3	105.5	34.7	55.0	74.0
Metals	19.6	36.1	47.4	23.9	38.5	56.0
Others	12.0	25.9	41.2	18.7	29.9	45.0
Net Income (Loss)	89.7	131.9	107.0	17.7	(134.0)	(210.0)
Energy	61.8	73.2	52.2	(14.3)	(173.9)	(274.0)
Oil and Natural Gas E&P	20.0	36.1	53.4	10.7	17.2	25.0
Metals	6.8	15.7	(11.2)	13.1	10.2	18.0
Others	1.1	6.9	12.6	8.2	12.5	21.0
Capex	245.0	355.0	500.0	215.0	305.0	460.0
Depreciation and Amortization	90.6	137.8	183.6	93.6	142.6	210.0

Ordinary Income by segment

(JPY billion)	FY2013			FY2014		
	1H	3Q (Apr.-Dec.)	Full Year	1H	3Q (Apr.-Dec.)	Full Year
	Actual	Actual	Actual	Actual	Actual	Forecast (Feb. 2015)
Ordinary Income (Loss)	176.1	255.9	302.3	42.0	(171.5)	(210.0)
Energy Business	91.4	112.6	108.2	(35.3)	(294.9)	(385.0)
Petroleum Products	(12.6)	(39.6)	(77.5)	(14.0)	(10.3)	31.0
Petrochemicals	41.8	58.4	69.6	9.2	9.2	16.0
Inventory Valuation	62.2	93.8	116.1	(30.5)	(293.8)	(432.0)
Oil and Natural Gas E&P Business	53.1	81.3	105.5	34.7	55.0	74.0
Metals Business	19.6	36.1	47.4	23.9	38.5	56.0
Resources Development	8.4	15.8	22.5	9.7	11.9	16.0
Smelting and Refining	5.6	10.0	12.5	7.4	12.4	18.0
Electronic Materials	4.3	7.0	9.0	6.3	11.1	16.0
Recycling and Environmental Services	2.3	3.8	5.6	3.4	5.0	7.0
Titanium	(3.4)	(3.8)	(5.4)	(3.8)	(3.7)	(3.0)
Inventory Valuation	2.4	3.3	3.2	0.9	1.8	2.0
Others	12.0	25.9	41.2	18.7	29.9	45.0



Balance Sheets

	Dec. 2013	Mar. 2014	Dec. 2014
(JPY billion)	Actual	Actual	Actual
Total assets	8,021.2	7,781.8	7,868.0
Current assets	4,141.0	3,765.6	3,548.6
- Cash and deposits	303.5	281.7	243.7
Noncurrent assets	3,880.2	4,016.2	4,319.4
Property, plant and equipment	2,346.3	2,389.2	2,496.0
Intangible assets	135.6	132.7	130.1
Investments and other assets	1,398.3	1,494.3	1,693.3
Liabilities	5,425.7	5,155.5	5,388.3
Interest-bearing debt	3,002.0	2,801.7	2,931.5
Other liabilities	2,423.7	2,353.8	2,456.8
Net assets	2,595.5	2,626.3	2,479.7
Shareholders' equity	1,987.2	1,962.3	1,769.6
Accumulated other comprehensive income (loss)	132.3	172.8	223.9
Minority interests	476.0	491.2	486.2



Performance Indicators

	FY2013		FY2014
	3Q (Apr.-Dec.)	Full Year	3Q (Apr.-Dec.)
(JPY billion)	Actual	Actual	Actual
Cash flows from operating activities	(4.7)	305.2	229.9
(Working capital)	(336.5)	(99.0)	266.1
Cash flows from investing activities	(358.0)	(479.8)	(305.0)
Free cash flows	(362.7)	(174.6)	(75.1)
Dividend and others	(1.9)	7.3	(61.3)
Net cash flows	(364.6)	(167.3)	(136.4)

	Dec. 2013	Mar. 2014	Dec. 2014
	Actual	Actual	Actual
Net D/E Ratio (times)	1.27	1.18	1.35
Shareholders' equity ratio (%)	26.4	27.4	25.3

Equity in earnings of unconsolidated subsidiaries and affiliates

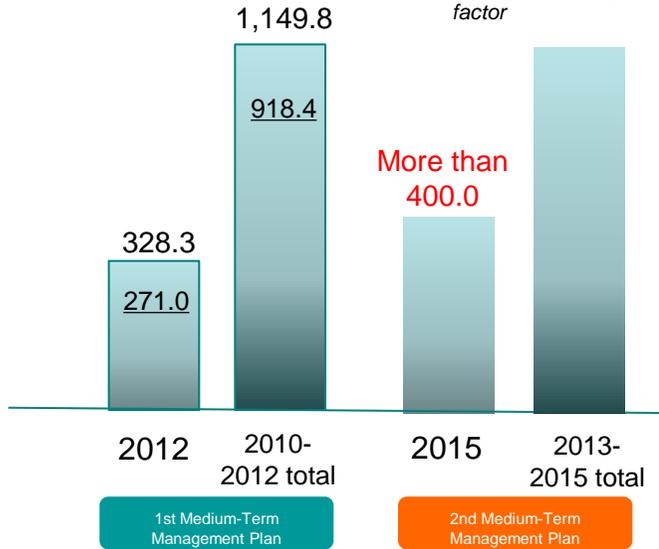
	FY2013			FY2014		
	1H	3Q (Apr.-Dec.)	Full Year	1H	3Q (Apr.-Dec.)	Full Year
(JPY billion)	Actual	Actual	Actual	Actual	Actual	Forecast (Feb. 2015)
Energy	2.3	5.2	6.9	2.1	3.9	7.5
Oil and Natural Gas E&P	3.3	4.4	6.6	3.2	3.9	4.5
Metals	16.5	28.6	39.6	18.3	23.5	32.0
Resources Development	13.2	23.3	32.0	15.4	18.9	26.0
Smelting and Refining	3.3	5.3	7.6	2.9	4.6	6.0
Others	0.5	0.9	1.5	0.8	1.2	1.0
Total	22.6	39.1	54.6	24.4	32.5	45.0



Review of Target

Ordinary Income (billion yen)

*Numbers with underline mean ordinary income excluding inventory valuation factor



Net D/E Ratio

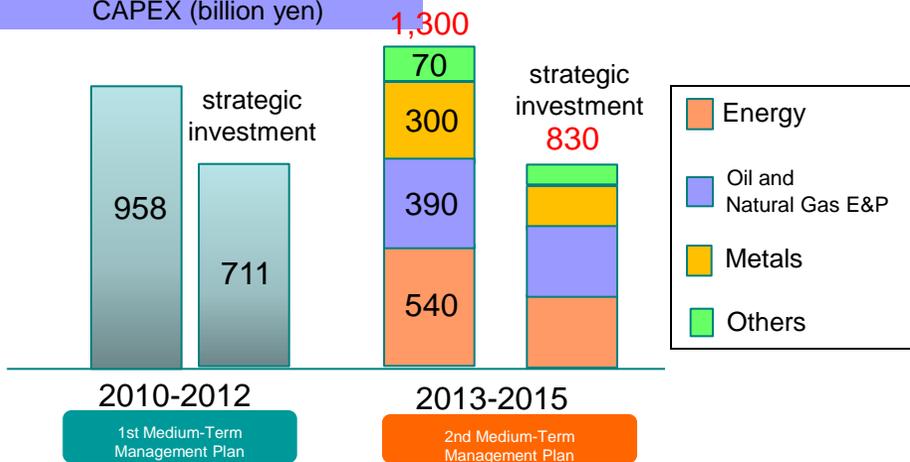


ROE(%)

*Excluding negative goodwill of merger for FY2010



CAPEX (billion yen)

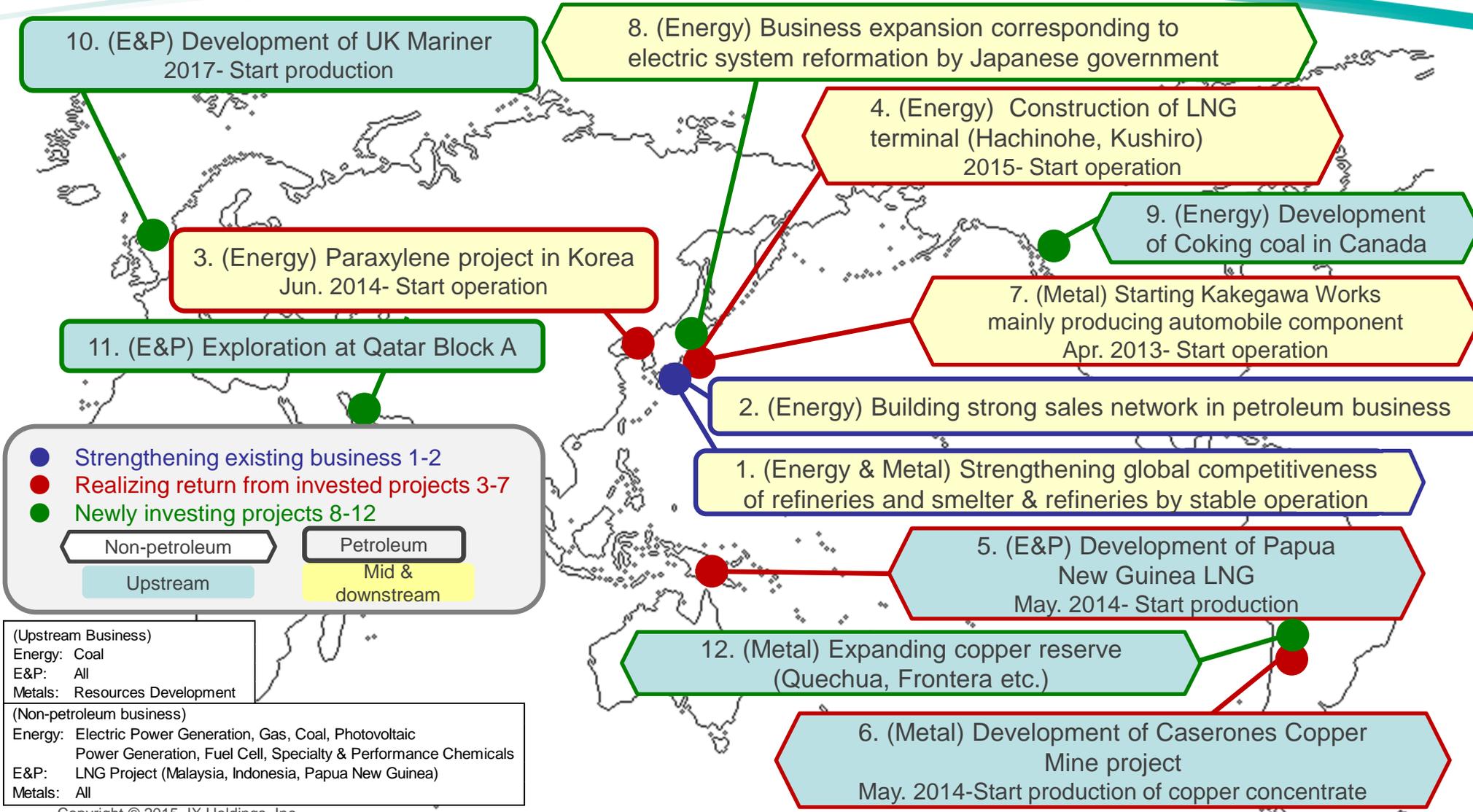


Target	
Ordinary Income	400 billion yen or more (FY2015)
ROE	10% or higher (FY2015)
Net D/E Ratio	0.9 times or lower (FY2015)
CAPEX (plan)	1,300+α billion yen (FY2013-2015 total)

*Utilizing "α" for additional strategic investment project corresponding to business environmental change



Highlight of Major Projects



- Strengthening existing business 1-2
- Realizing return from invested projects 3-7
- Newly investing projects 8-12



(Upstream Business)
 Energy: Coal
 E&P: All
 Metals: Resources Development

(Non-petroleum business)
 Energy: Electric Power Generation, Gas, Coal, Photovoltaic Power Generation, Fuel Cell, Specialty & Performance Chemicals
 E&P: LNG Project (Malaysia, Indonesia, Papua New Guinea)
 Metals: All

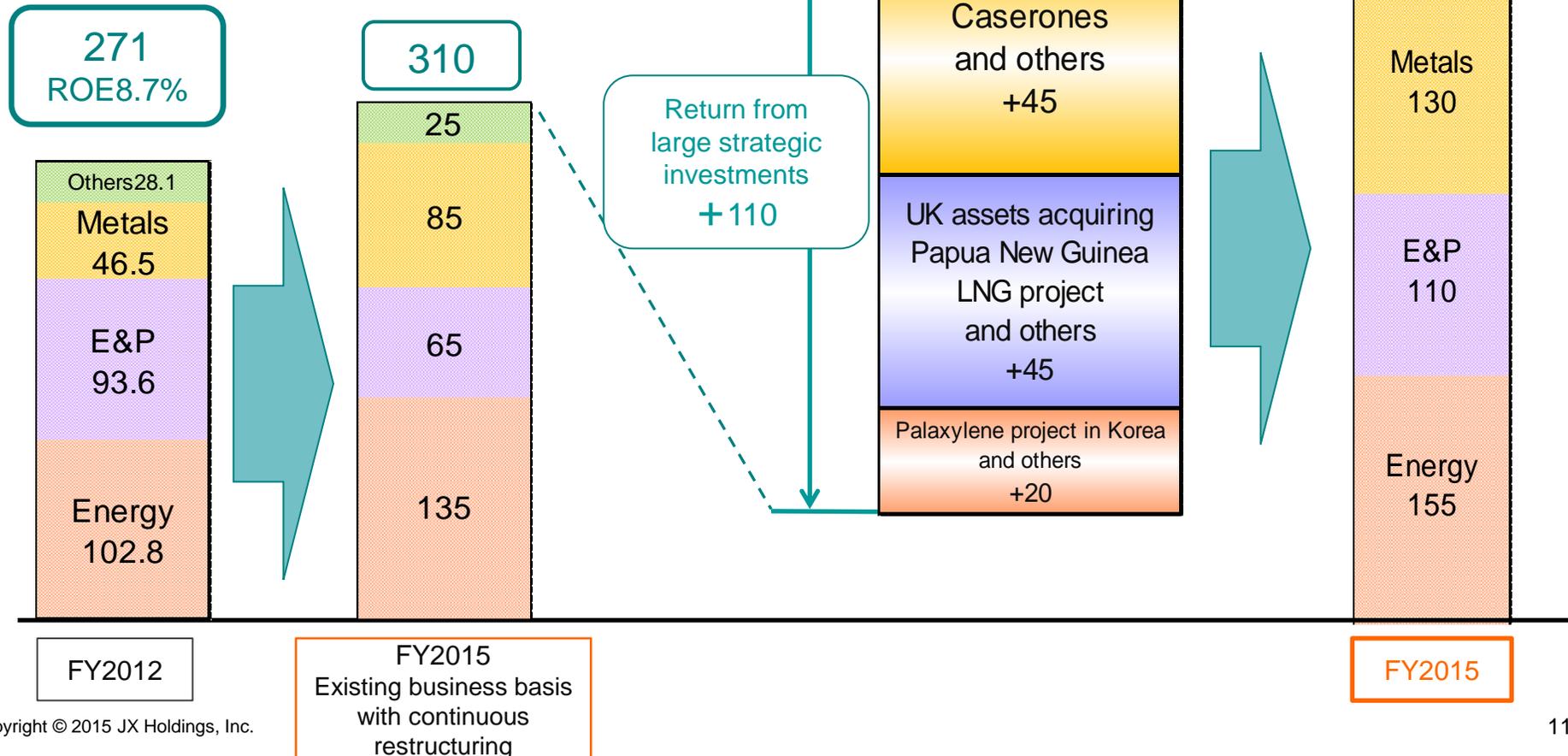


Earnings Plan (Ordinary Income Excluding Inventory Valuation Factor) (Unit : billion yen)

Securing stable profitability in existing business by realizing overwhelming competitiveness through continuous restructuring

Realizing return from strategic investment for business expansion

420
ROE more than 10%





Shareholder Return Policy

Basic Shareholder Return Policy

Redistribute profits by reflecting consolidated business results while striving to maintain stable dividends

Indication of Shareholder Return for 2nd Medium-Term Management Plan Period

Based on the basic policy, during the 2nd medium-term management plan period (FY2013-2015), we will strive to maintain dividends of 16 yen per share per annum. When we secure stable profitability in existing business and foresee realization of return from strategic investments, we will expand shareholder return centering on increase of dividend.

Reference) Dividend from FY2010-2014

	2010	2011	2012	2013	2014 (Forecast)
Dividend (yen/share)	15.5	16.0	16.0	16.0	16.0
EPS (yen/share)	34	69	64	43	-84

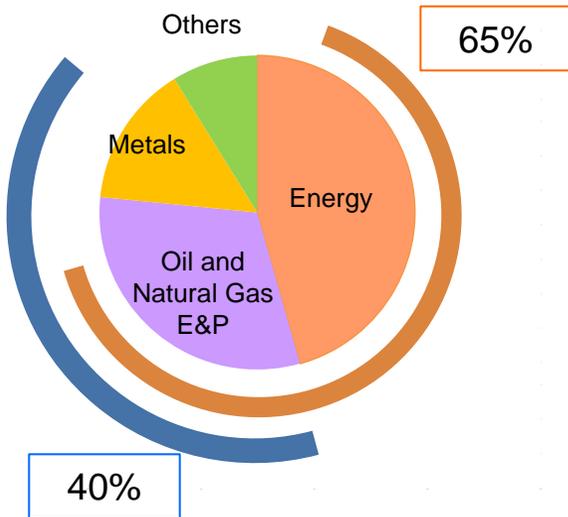
*Excluding impact of negative goodwill

Target of JX Group (2020)

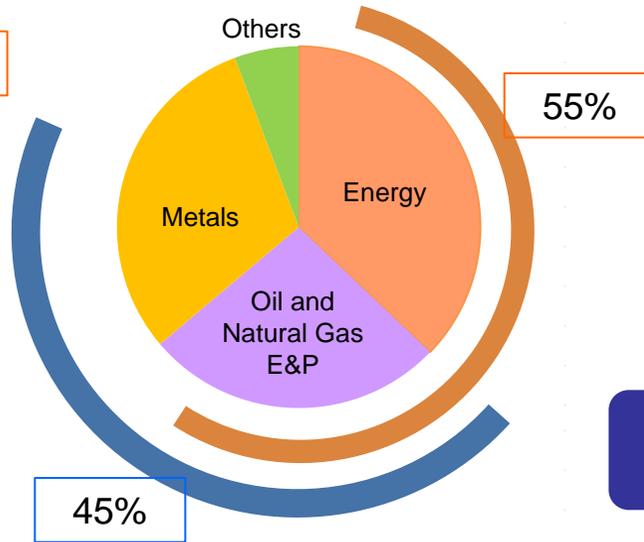
Well-balanced business portfolio
petroleum and non-petroleum, upstream and mid & downstream business

Balance of ordinary income
excl. inventory valuation

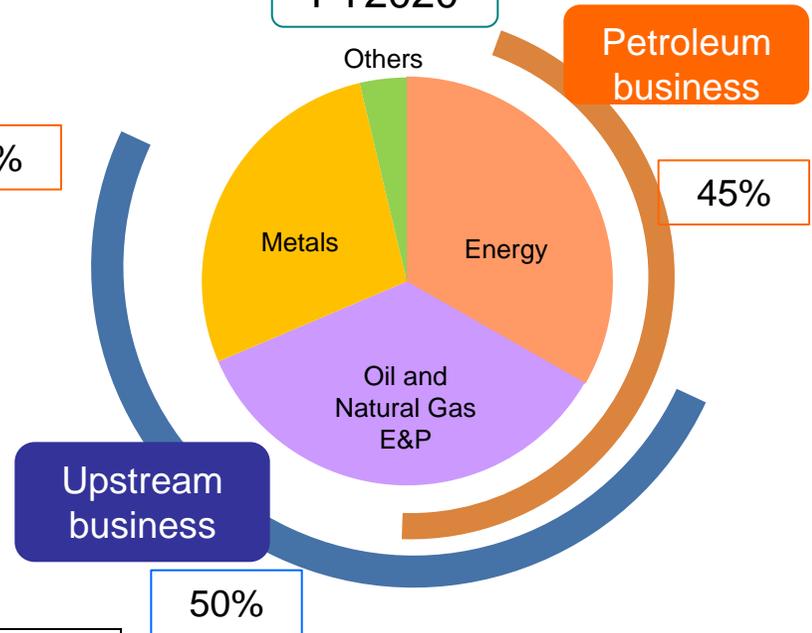
FY2012



FY2015



FY2020



(Upstream Business)
Energy: Coal
E&P: All
Metals: Resources Development

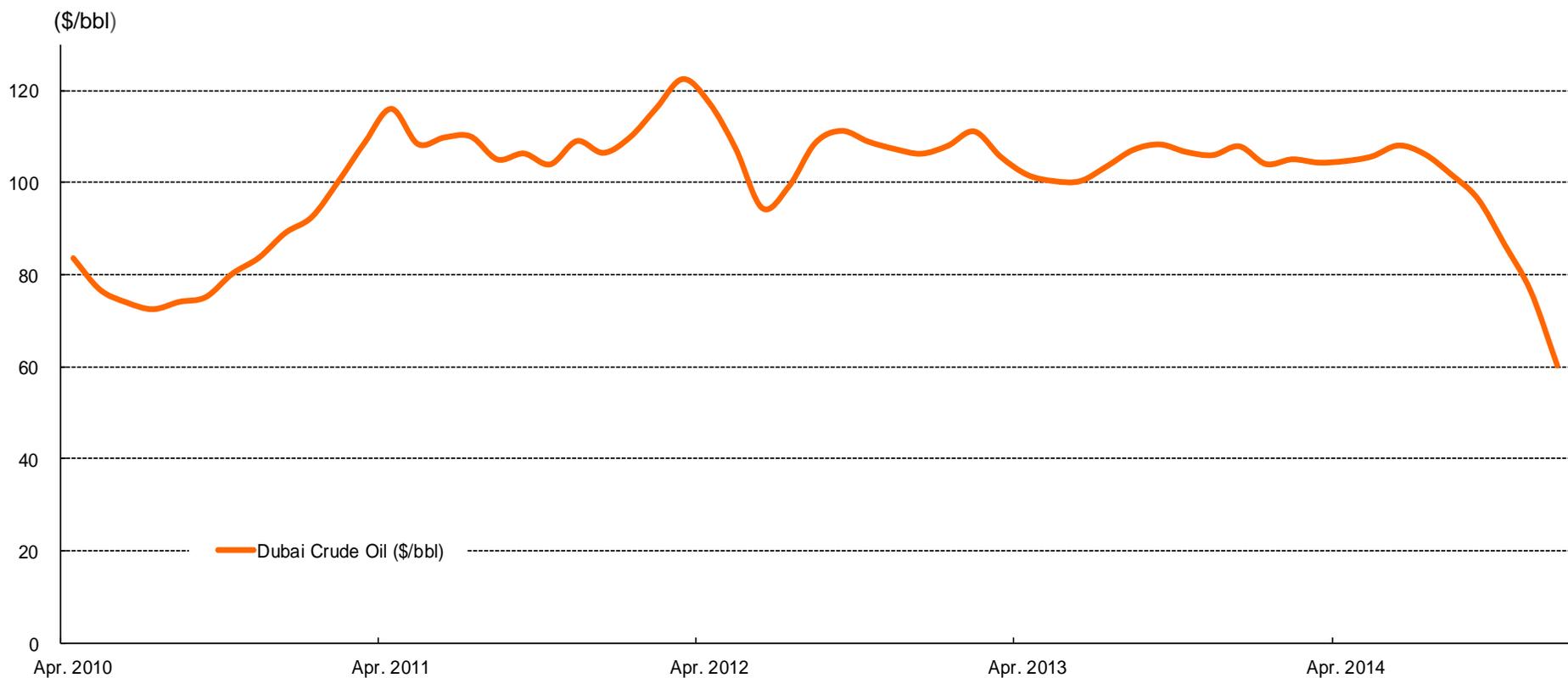
(Non-petroleum business)
Energy: Electric Power Generation, Gas, Coal, Photovoltaic Power Generation, Fuel Cell, Specialty & Performance Chemicals
E&P: LNG Project (Malaysia, Indonesia, Papua New Guinea)
Metals: All



Historical Dubai Crude Oil Price

(\$/bbl)

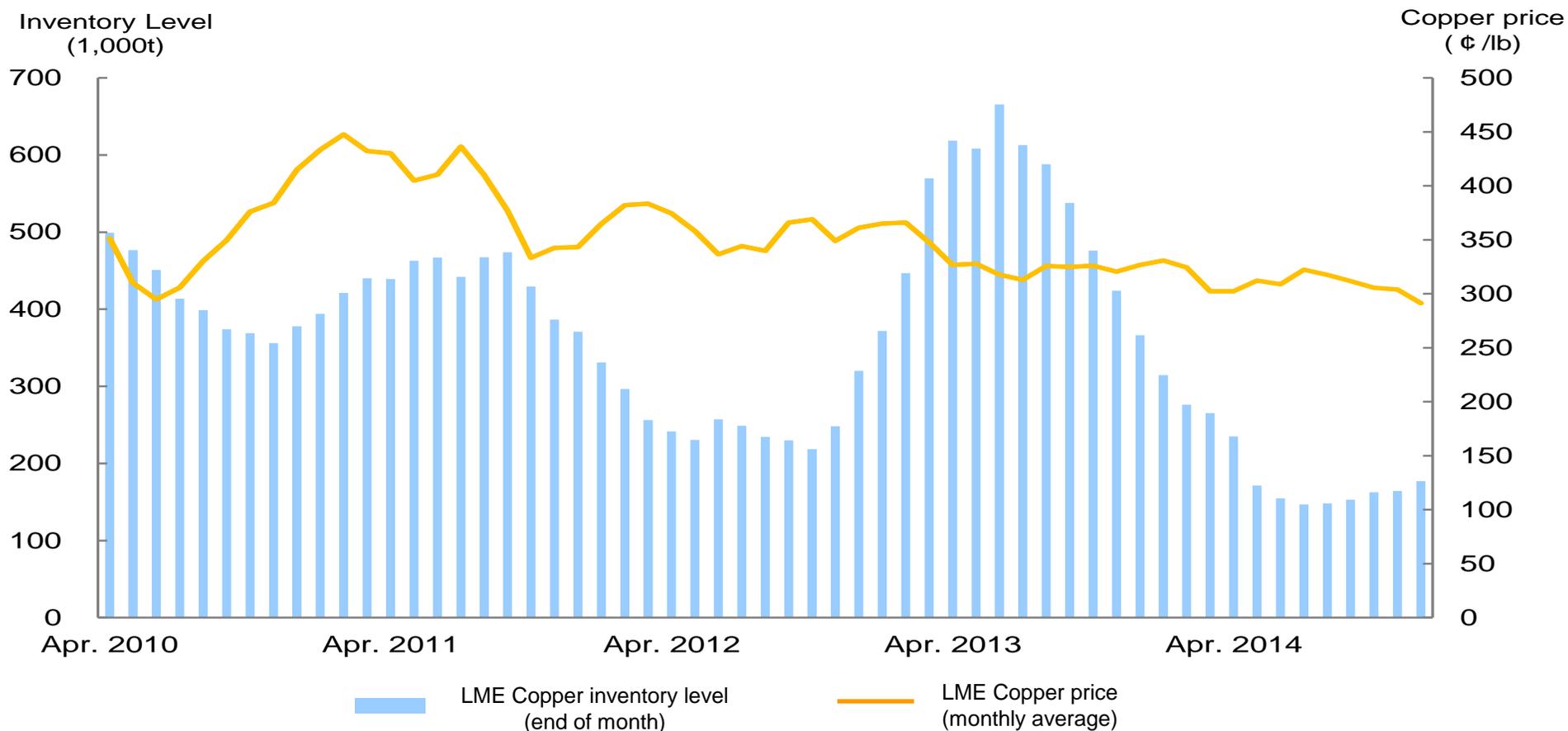
Average Price	FY2010	FY2011	FY2012	FY2013					FY2014		
				1Q	2Q	3Q	4Q	FY	1Q	2Q	3Q
Dubai Crude Oil	84	110	107	101	106	107	104	105	106	101	74





Historical Copper Price and Inventory Level

Average Price	(¢ /lb)										
	FY2010	FY2011	FY2012	FY2013					FY2014		
				1Q	2Q	3Q	4Q	FY	1Q	2Q	3Q
Copper	369	385	356	324	321	324	319	322	308	317	300

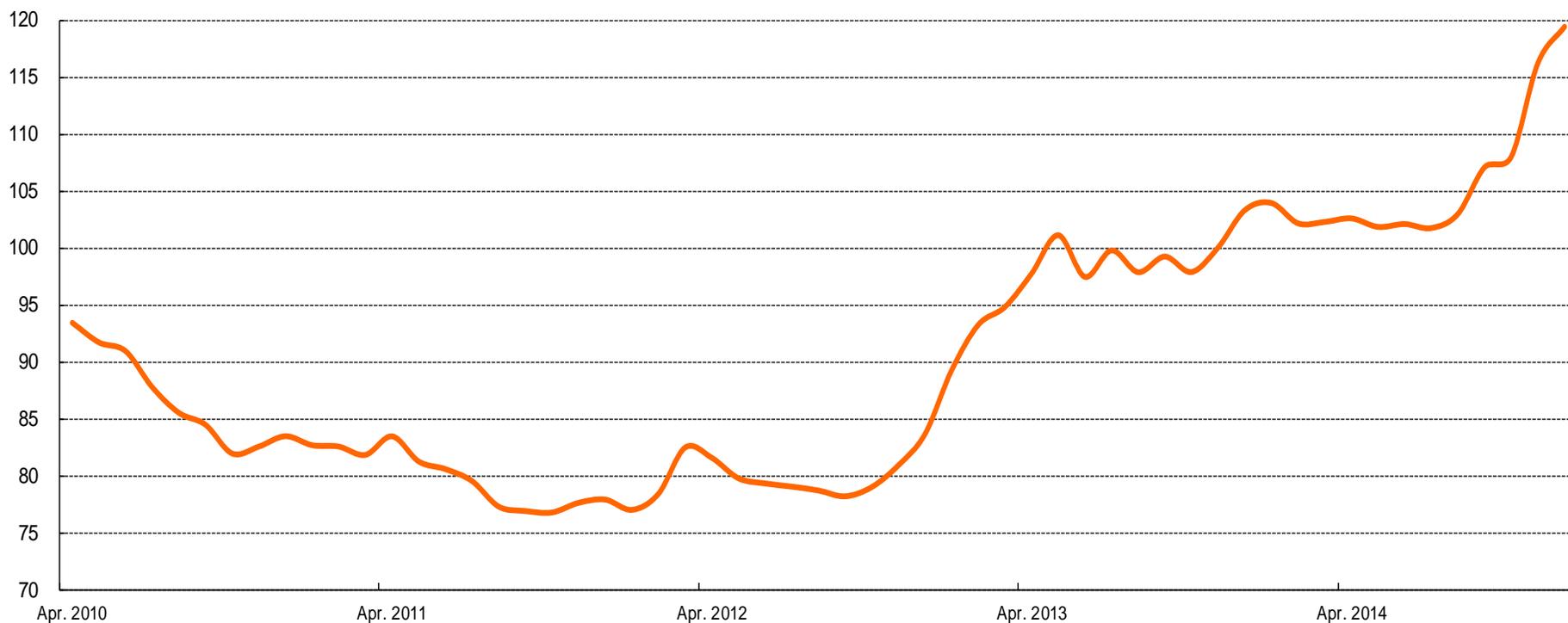




Historical Exchange Rate

Average Price	FY2010	FY2011	FY2012	FY2013					FY2014		
				1Q	2Q	3Q	4Q	FY	1Q	2Q	3Q
Exchange Rate	86	79	83	99	99	100	103	100	102	104	115

(Yen/\$)



A thick, teal-colored curved line that starts on the left, rises to a peak in the middle, and then descends towards the right.

Strategies of Energy Business

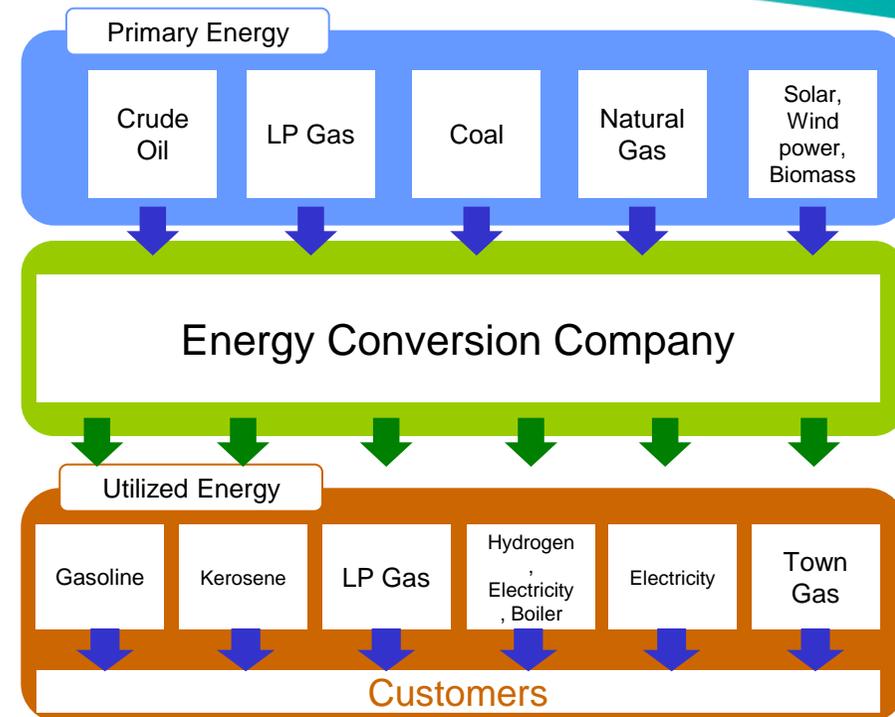
Strategy and Action Plan

Petroleum Refining & Marketing/Energy Conversion

Business Environment	Domestic petroleum demand decline and competition with import products continue
Basic Strategy	Strengthening profitability of refining & marketing
	<ul style="list-style-type: none"> ➤ Strengthening global competitiveness of refineries <ul style="list-style-type: none"> • Safe and Stable operation • Cost reduction (Energy saving, Utilizing for bottom oil) • Conversion to chemical factory ➤ Establishing strong supply chain <ul style="list-style-type: none"> • Building strong sales network • Improving brand value (Introduce new Dr. Drive brand, Card strategy, etc.)

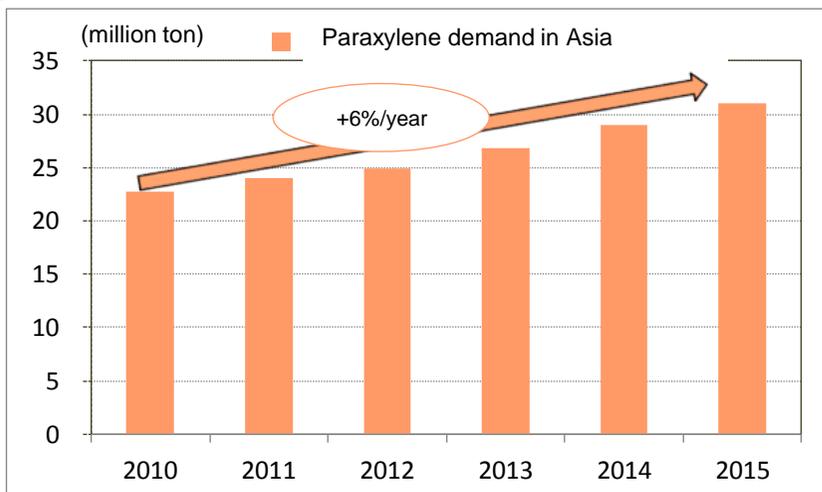
Business Environment	Reformation of energy policy by Japanese government progress
Basic Strategy	Enhancing business as an energy conversion company

- Electricity : Business expansion corresponding to electric system reformation by Japanese government
- Gas : Construction of LNG terminal (Hachinohe & Kushiro) starting operation in 2015 (Enhancing providing base, Acquiring new demand)
- Coal : Development of coking coal in Canada , Increasing domestic sales
- Solar, Fuel Cell : Mega solar project, fuel cell business (Challenge for realizing a society with independent and distributed energy system)
- Hydrogen : Bring forward demonstration test of providing infrastructure

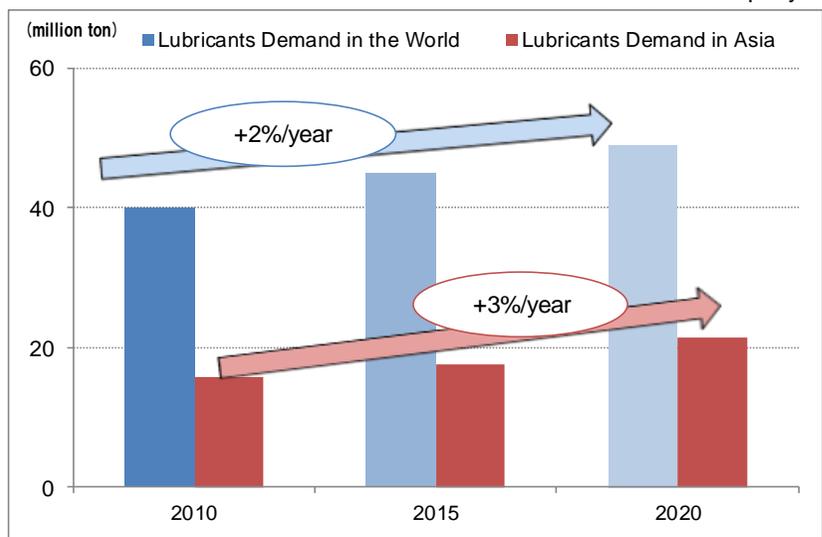


Strategy and Action Plan

Basic Chemicals/Lubricants/Specialty & Performance Chemicals



Source : company data



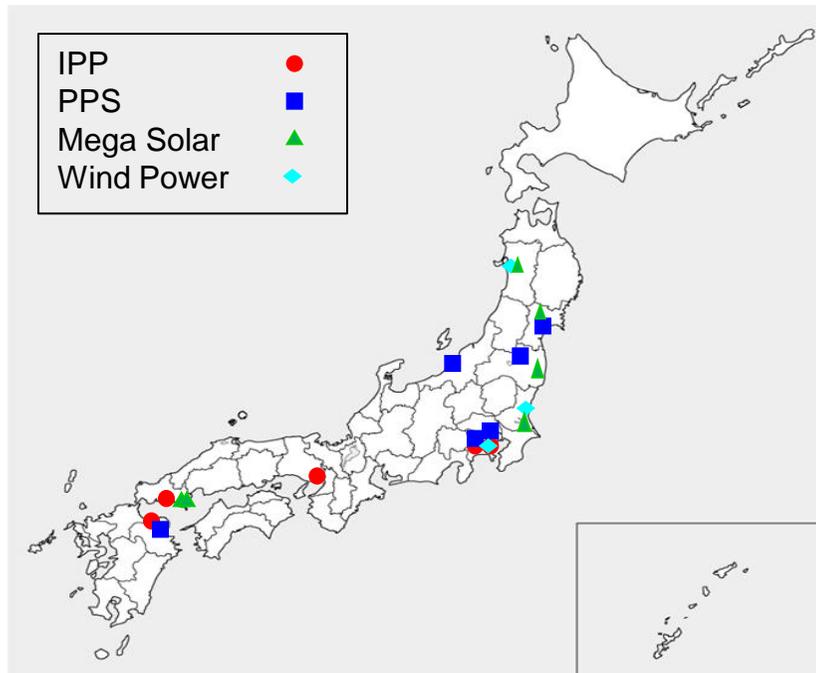
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Source : company data

Business Environment	Energy and materials market continues to expand centering in Asia
Basic Strategy	Establishing presence in overseas market
➤ Basic Chemicals	<ul style="list-style-type: none"> Paraxylene project in Korea (Starting operation in 2014) (Providing capacity of JX Group : 2,620 → 3,120 thousand ton) Corresponding to business environmental change in olefins and aromatics
➤ Lubricants	<ul style="list-style-type: none"> Enhancing business with base oil project in Korea Strengthening production and marketing network overseas
Business Environment	Demand of high value-added products increases in emerging countries
Basic Strategy	Acquiring demand of high value-added products based on original technology
➤ Specialty and Performance Chemicals(Introduction of Company system from Apr. 2014)	<ul style="list-style-type: none"> Expanding overseas production network Increasing sales volume of cell incubation and others

Action for Energy Conversion Company (Electricity Business)

✓ Location of Electricity Business (As of Jan. 2015)



✓ Expansion of Electricity Business

PPS

- Started receiving electricity from Kawasaki Natural Gas Power Generation Co., Ltd, joint venture with Tokyo Gas Co., Ltd.(2008)
- Scheduled to establish the Solvent De-Asphalting equipment and the power generation facilities in the Kashima Refinery.(FY2015)
- Decided an entry to home electricity retail business.(FY2016)
- Scheduled to establish the power generation facilities in the Mizushima Refinery.(FY2018)

Mega Solar

Started Operation		Startup Plan	
Sendai	Feb. 2013	Masaki	Feb. 2015
Kudamatsu	Mar. 2013	Takamatsu	Feb. 2015
Kasumigaura	Nov. 2013	Uruma	Mar. 2015
Iwaki	Jul. 2014	Oita	Mar. 2015
2nd Kudamatsu	Sep. 2014	Hitachi	Oct. 2015
Akita	Oct. 2014	Oga	Nov. 2015
		Asaka	Mar. 2016
		Hiroshima	Mar. 2016

✓ Power Generating Capacity of each Business

IPP	5 stations	740 thousand kW*
PPS	6 stations	555 thousand kW
Mega Solar	6 stations	12 thousand kW
Wind Power	3 stations	5 thousand kW
Total (equity basis)		1,312 thousand kW

* Contract base

Wind Power

- Started operation of Wind Power at the Akita Oil Terminal and the Kashima Refinery.(2003, 2005)
- Started operation of Ohgishima Wind Power Station.(2010)

Action for Energy Conversion Company (LNG Business)

✓ Hachinohe LNG Terminal Project

- Promoting construction of Hachinohe LNG Import Terminal and Kushiro LNG Satellite Terminal.
 - Taking in the demand of city gas and industrial use in the region of northern Tohoku and eastern Hokkaido.
 - Supplying natural gas to general electric utility.
(For Hachinohe Thermal Power Plant of the Tohoku Electric Power Co., Inc.)

【LNG supply system of JX】

Hachinohe and Kushiro LNG terminals

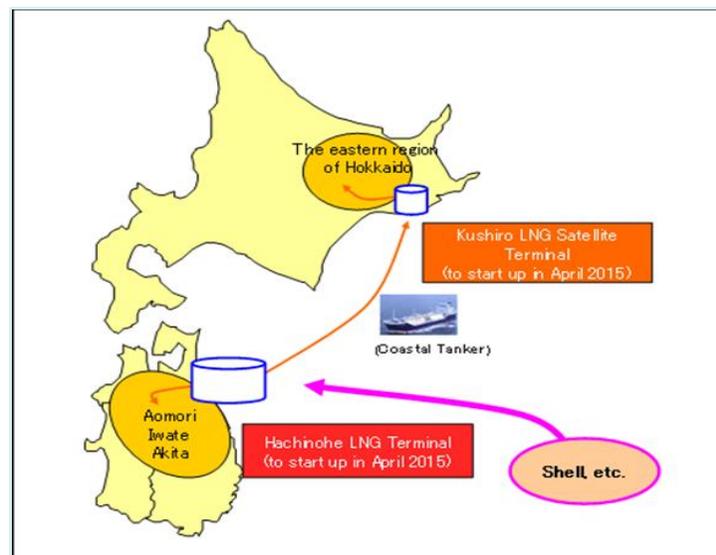
【Current】	Hachinohe (Satellite Terminal)	
Operation start	Mar. 2007	
Tank capacity (thousand KL)	4.5 x1 tank	



【2015~】	Hachinohe (Import Terminal)	Kushiro (Satellite Terminal)
Operation start	Apr. 2015 (scheduled)	
Tank capacity (thousand KL)	140x2 tanks	10x1 tank

Mizushima LNG Import Terminal

	Tank No.1	Tank No.2
Operation start	Apr. 2006	Apr. 2011
Tank capacity (thousand KL)	160	160
Ownership	JX Nippon Oil & Energy The Chugoku Electric Power Co.,Inc.	50% 50%



Action for Energy Conversion Company (Coal Business)

✓ Our Coal business

1. Main Upstream Businesses

- Acquired the interest of Bulga mine in Australia, through an investment to Oakbridge joint venture.(Sep.1990)
- Started production and sales of Bulga coal. (Mar. 1991)
- Acquired of the interest and dealership of Sukunka /Suska coal deposits, through an investment to Xstrata Coal British Columbia, and started coking coal joint venture with Xstrata Coal. (Mar. 2012)
- Started to develop new mining areas in the Bulga Coal Mine in Australia.(Dec. 2014)

2. Sales

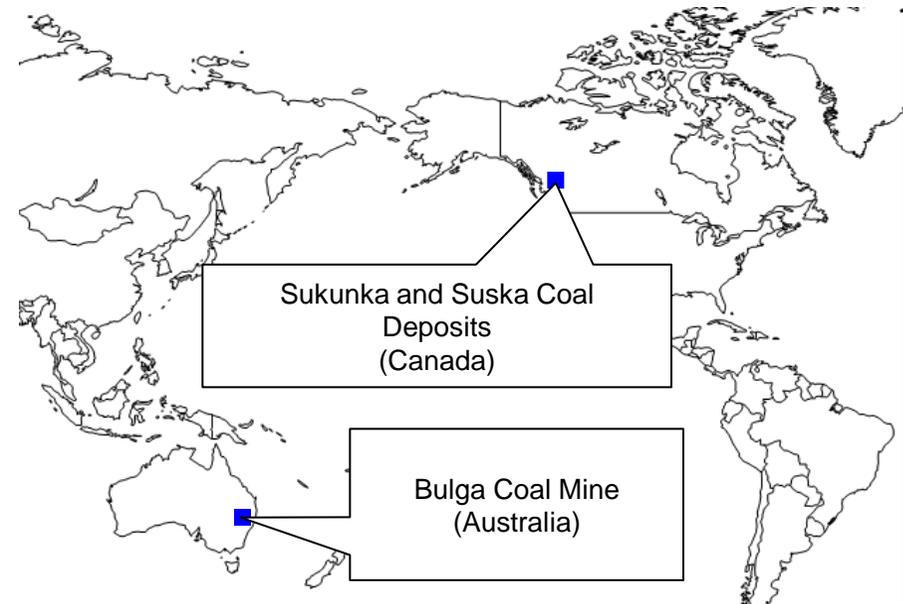
- Mainly supplying Bulga coal to customers. (Approx. 9 million tons/year)

3. Coal Transshipment Station

- Coal Transshipment Station was constructed on the site of former Kudamatsu Refinery, and started its operation.(May 2001)

✓ Our Interest of Coal Mine/Deposits

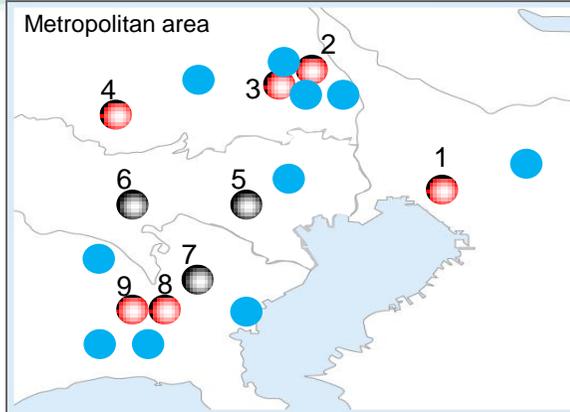
	Bulga Coal Mine	Sukunka and Suska Coal Deposits
Location	New South Wales, Australia	British Columbia, Canada
Interest	13.3%	25.0%
Reserves/ Resouces	Recoverable reserves more than 300 million tons	Resouces Sukunka Deposit Approx. 240million tons Suska Deposit Approx. 240million tons
Production capacity	Approx. 11million tons/year	Apporox. 9.5 million tons/year (scheduled)



Action for Energy Conversion Company (Hydrogen Business)

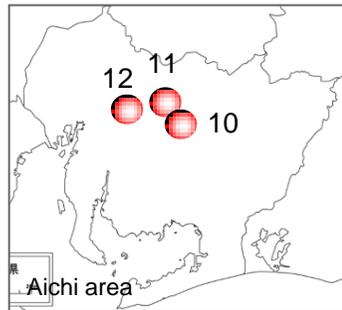
【Metropolitan area】

- 1 Dr. Drive Self Takeishi inter
- 2 Dr. Drive Self Kasukabe-Chuou
- 3 Dr. Drive Owada
- 4 Dr. Drive Self Sayama-Negishi
- 5 Suginami-ku
- 6 Hachioji city
- 7 Asahi-ku, Yokohama city
- 8 Dr.Drive Kamiida
- 9 Dr.Drive Ebina-Chuou



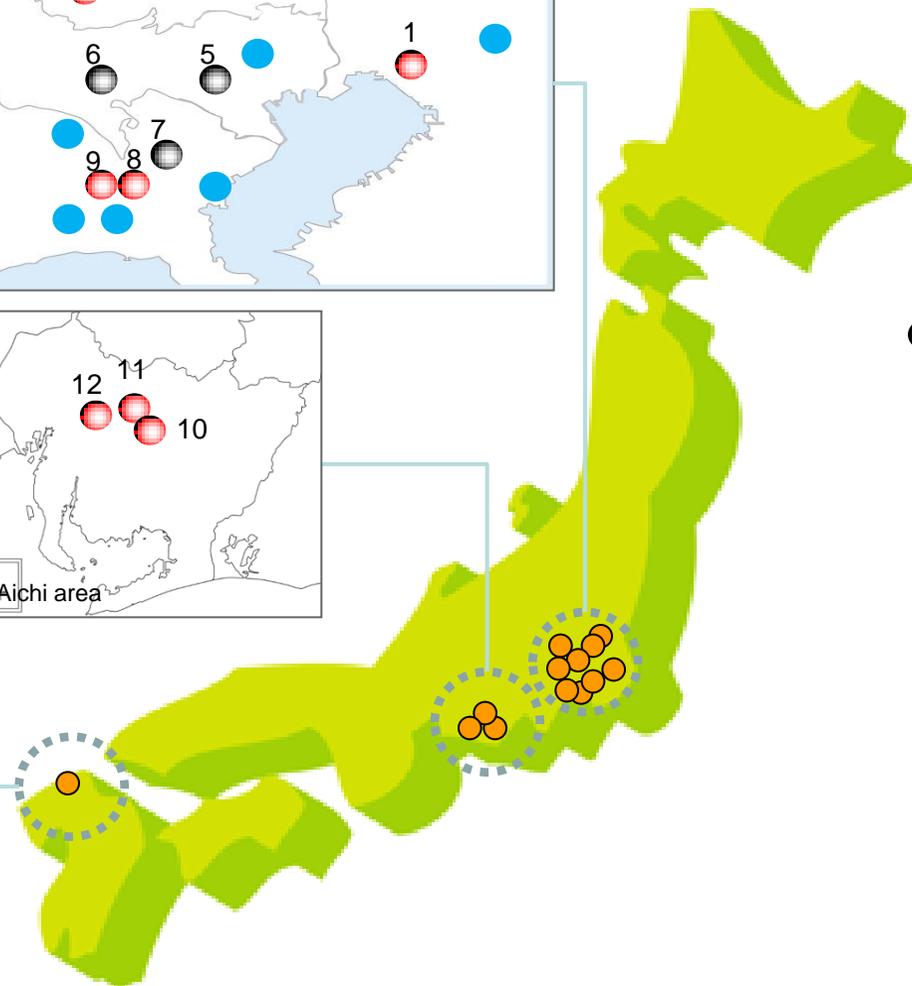
【Aichi area】

- 10 Dr.Drive Okazaki-Hane
- 11 Dr.Drive Self Miyoshigaoka
- 12 Dr.Drive Kaminokura*1



【Kitakyushu area】

- 13 Dr.Drive Yahata-Higashida*1



● : Built-in type



● : Independent type



● : Portable type*2

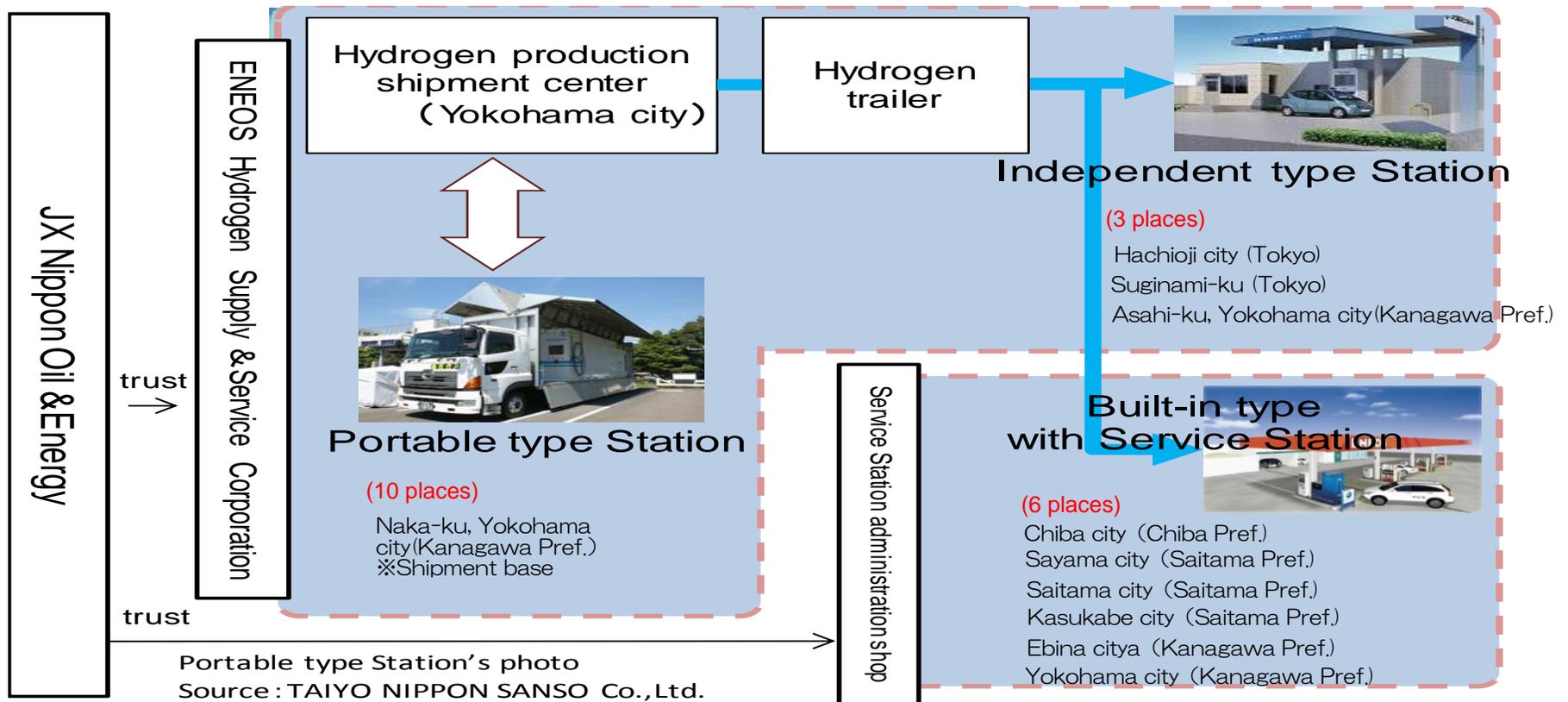


*2 Under base adjustment

Action for Energy Conversion Company (Hydrogen Business)

✓ Construction of hydrogen supply infrastructure (19 places in metropolitan area)

- Established ENEOS Hydrogen Supply & Service Corporation. (Oct.2014)
- Constructing the effective hydrogen supply system in the early stage of the fuel cell-powered car spread.



Enhance Overseas Businesses (Paraxylene)

Main use of Paraxylene



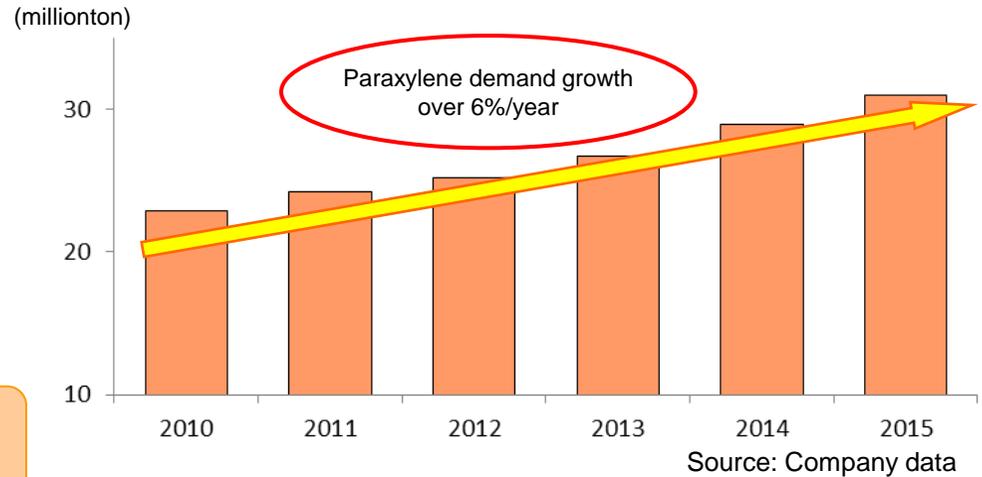
Polyester fiber



PET bottles

Outlook for Paraxylene Demand in Asia

Group's current supply capacity of Paraxylene
3,120 thousand tons /year = **No.1 in Asia**



Outline of a paraxylene joint venture project with SK Group of South Korea

Location : Ulsan, Korea

Capacity : 1,000 thousand tons / year One of the world's largest capacities

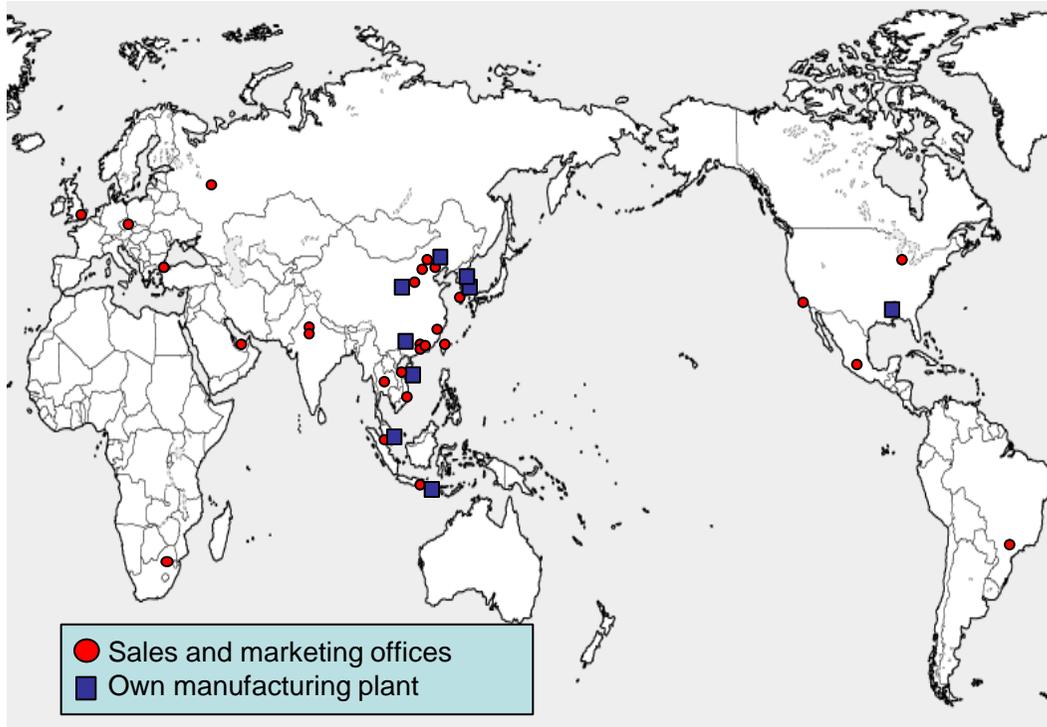
Production Start : June 2014

Investment : approx. 80 billion JPY

Ownership :
 JX Nippon Oil & Energy 50% -1 share
 SK Global Chemical 50% +1 share

Enhance Overseas Businesses (Lubricants)

✓ Location of Overseas Lubricants Business (As of Jan. 2015)



- Expanding overseas business, especially in Asia.

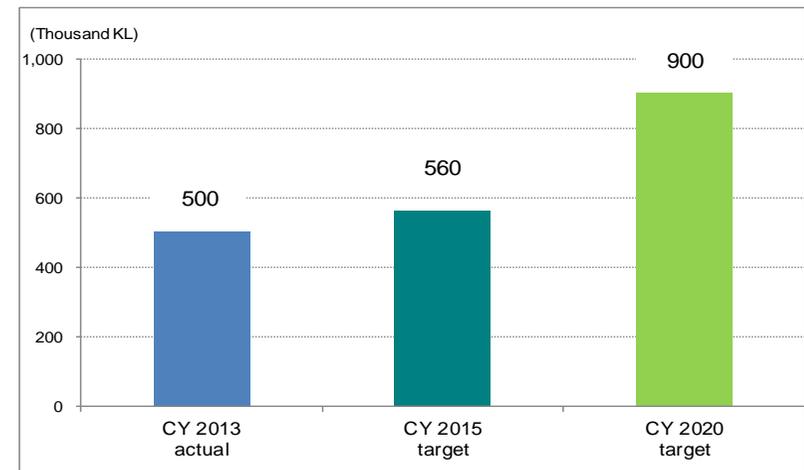
Sales and marketing offices	27
Manufacturing plant	47
(Own manufacturing plant:9, Contractors:38)	



✓ Expansion of Overseas Lubricants Business

- Established a lubricants marketing company in Dubai. (Jul. 2011)
- Lubricants manufacturing plant started its operation in Indonesia. (Apr. 2012)
- Lubricants manufacturing plant started its operation in Vietnam. (Feb. 2014)
- Started joint venture business for lubricants base oil with SK Group of South Korea. (Oct. 2012)
- Established a marketing office in Johannesburg. (Apr. 2014)
- Established a lubricants marketing company in India. (Oct. 2014)
- Established a lubricants marketing company in Mexico. (Jan. 2015)

✓ Medium-Term Target of Overseas Lubricants Sales





Strategies of Oil and Natural Gas E&P Business

Strategy and Action Plan

Expanding Reserves and Production Volume Mainly through Exploration



Business Environment

- Crude oil and natural gas demand increases firmly centered on emerging countries.
- Resources and energy prices stay high but volatile.
- Competition for natural resources escalates.
- Development technologies become more challenging.

Basic Strategy 1

Expanding reserves and production volume mainly through exploration

Toward production volume of 200 thousand BD in 2020

- Shifting developing projects to production and projects before FID to developing

(Started production)

- Papua New Guinea LNG project

(On developing)

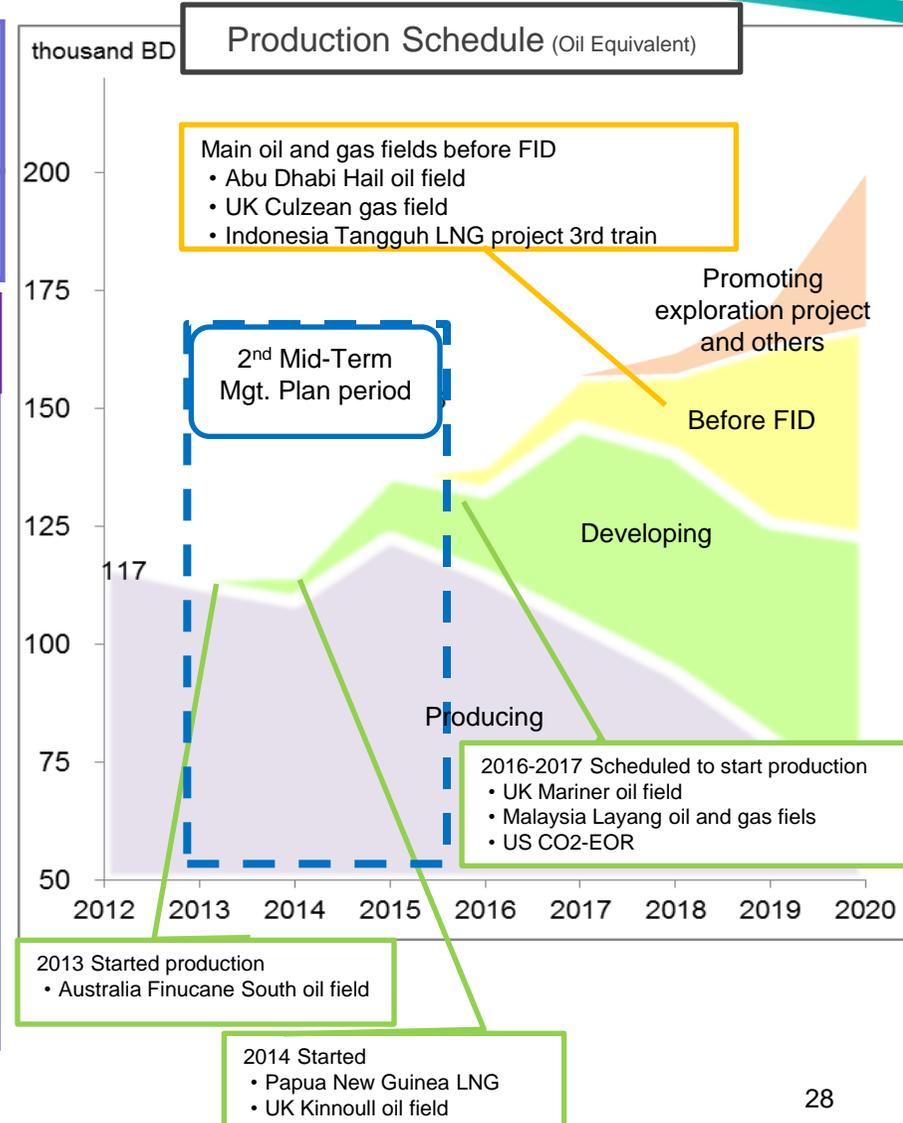
- UK Mariner oil field

(Before FID)

- UK Culzean gas field
- Indonesia Tangguh LNG project 3rd train

- Promoting large exploration operator projects (Investing 90billion yen in 3years)

- Malaysia : Deepwater Block R offshore Sabah
- Qatar : Block A



Strategy and Action Plan

Focusing on Core Business Area and Technology/Restructuring Business Portfolio

Basic Strategy 2

Establishing superiority by focusing core business area and technology

Aiming to secure independence and increase access to business chance by allocating management resources to core and core candidate countries and accumulating technology through operator projects

Core Area

- Core countries: Malaysia, Vietnam, UK
 - Continuing exploration, development and resource acquisition utilizing knowledge and relationship with national petroleum companies etc.
- Core candidates : UAE/Qatar, Myanmar, Australia
 - To be developed as core countries acquiring business chance aiming for operatorship and strengthening business base

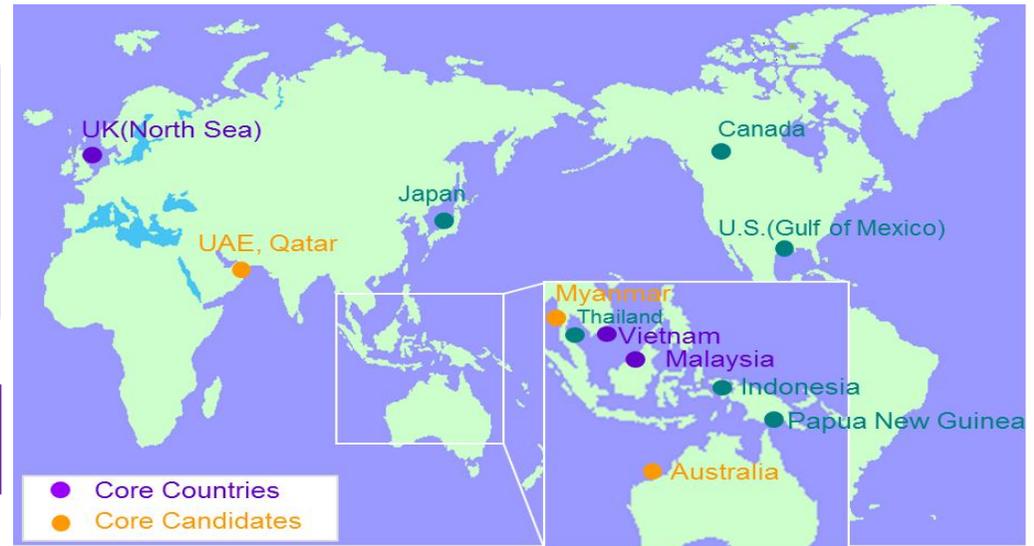
Core Technology

- Deepwater
 - Malaysia Deepwater Block R offshore Sabah
 - UK West of Shetland offshore
- Enhanced Oil Recovery
 - Vietnam Rang Dong Oil Field HCG-EOR
 - US CO2-EOR
- Tight Oil, Tight Gas, Heavy Oil
 - UK Mariner oil field

Basic Strategy 3

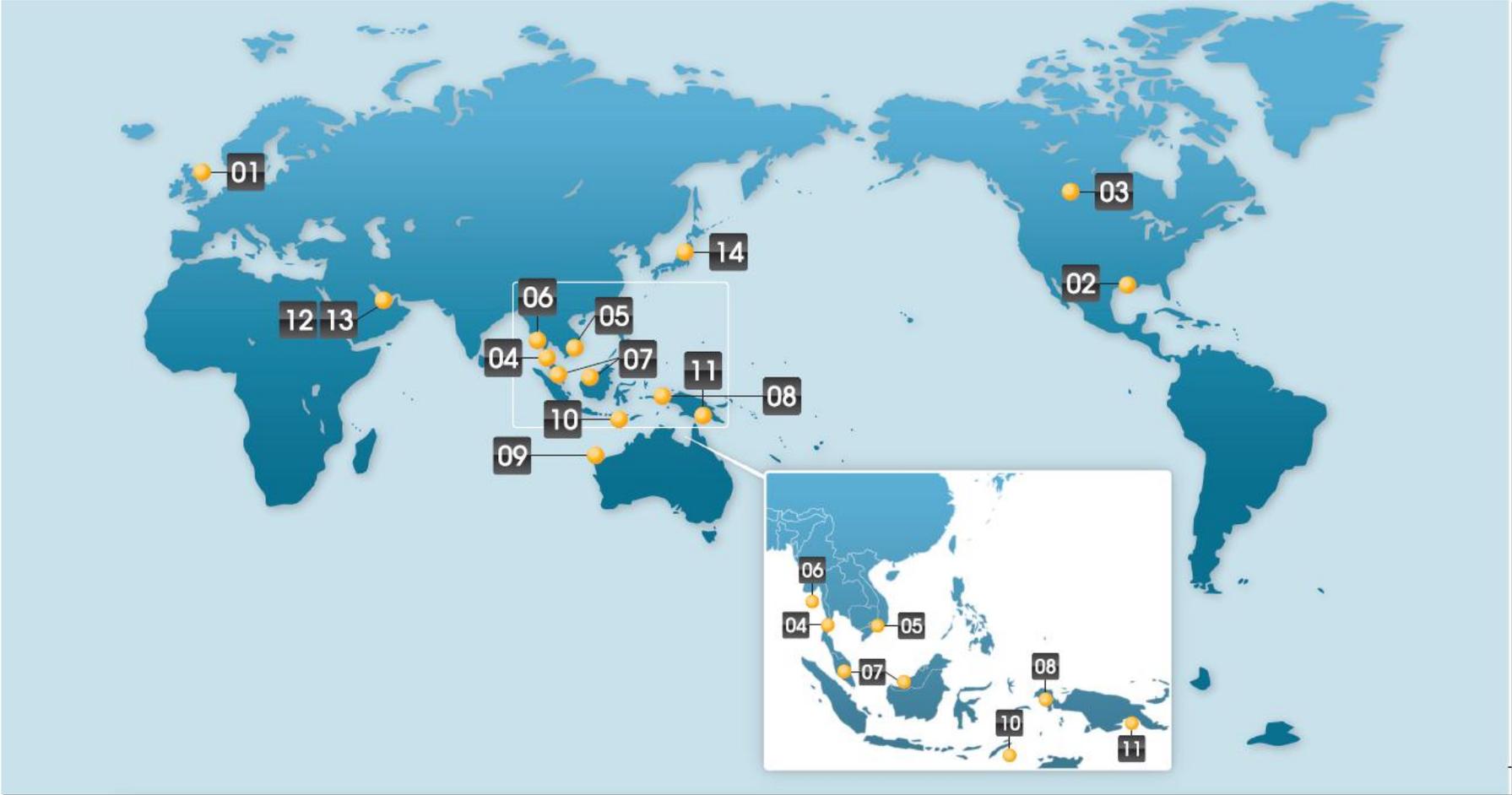
Restructuring business portfolio responding to business environmental change

Rearranging asset portfolio timely





Business Area



Business Activities

	▼ Project Company	In Production ●	Under Development ●	Under Exploration ●
01	The North Sea	JX Nippon Exploration and Production (U.K.) Ltd.	●	● ●
02	The U.S. Gulf of Mexico	JX Nippon Oil Exploration (U.S.A.) Ltd. JX Nippon Oil Exploration (EOR) Ltd. / Petra Nova Parish Holdings LLC	●	●
03	Canada	Japan Canada Oil Company / Mocal Energy	●	
04	Thailand	JX Nippon Oil & Gas Exploration Corp.		●
05	Vietnam	Japan Vietnam Petroleum Co., Ltd. JX Nippon Oil & Gas Exploration Corp.	●	● ●
06	Myanmar	Nippon Oil Exploration (Myanmar) Ltd. JX Nippon Oil & Gas Exploration (Myanmar) Ltd.	●	● ●
07	Malaysia	JX Nippon Oil & Gas Exploration (Malaysia) Ltd. JX Nippon Oil & Gas Exploration (Sarawak) Ltd. JX Nippon Oil & Gas Exploration (Peninsular Malaysia) Ltd. JX Nippon Oil & Gas Exploration (Onshore Sarawak) Ltd. JX Nippon Oil & Gas Exploration (Deepwater Sabah) Ltd. JX Nippon Oil & Gas Exploration (Offshore Malaysia) Sdn. Bhd.	●	● ● ● ● ● ●
08	Indonesia	Nippon Oil Exploration (Berau) Ltd.	●	●
09	Australia	JX Nippon Oil & Gas Exploration (Australia) Pty Ltd.	●	●
10	JPDA *	Japan Energy E&P JPDA Pty Ltd.		●
11	Papua New Guinea	Merlin Petroleum Company / Southern Highlands Petroleum Co., Ltd. Nippon Oil Exploration (Niugini) Ltd. / Murray Petroleum Co., Ltd. Nippon Papua New Guinea LNG LLC	●	● ●
12 13	U A E · Qatar	Abu Dhabi Oil Co., Ltd. United Petroleum Development Co., Ltd. JX Nippon Oil & Gas Exploration (Qatar) Ltd.	●	● ● ●
14	Japan	JX Nippon Oil & Gas Exploration Corp.	●	● ●

* Joint Petroleum Development Area between Australia and East Timor



Outline of Oil and Natural Gas E&P Projects

	Project Name/Company	Sales Volume(Jan.-Sep. 2014) (1,000BOED)			Reserves(million BOE) *1 *2			Reference pages
		* 1	Oil	Gas	As of the end of 2013	As of the end of 2012	As of the end of 2011	
1	(North Sea, U.K.) JX Nippon Exploration and Production (U.K). Limited	8	7	1	184	126	47	60 ~ 62
2	(Gulf of Mexico(U.S.A.)) JX Nippon Oil Exploration U.S.A. Limited	3	2	1	16	23	25	64 ~ 65
3	(Canada) Japan Canada Oil Company Limited	12	12	0	260	253	251	66
5	(Vietnam and other) Japan Vietnam Petroleum Company, Limited, other	8	6	2				68 ~ 69
6	(Myanmar) Nippon Oil Exploration (Myanmar) Limited	8	1	7				70 ~ 71
7	(Malaysia) JX Nippon Oil & Gas Exploration (Malaysia) Limited JX Nippon Oil & Gas Exploration (Sarawak) Limited	19 14	3 1	16 13				72 ~ 75
8	(Indonesia) Nippon Oil Exploration (Berau) Limited	20	1	19	<Sub Total> 196	<Sub Total> 233	<Sub Total> 259	76
9	(Australia and other) JX Nippon Oil & Gas Exploration (Australia) Pty Ltd., other	2	2	0				77 ~ 79
11	(Papua New Guinea) Merlin Southern Highlands Petroleum Co., Ltd.	8	6	2	<Sub Total> 95	<Sub Total> 99	<Sub Total> 99	80 ~ 81
12,13	(United Arab Emirates, Qatar and others) * 3 Abudhabi Oil Co., Ltd., United Petroleum Development Co., Ltd. and others	11	11	0	57	66	69	82 ~ 83
Total		113	52	61	808	800	749	

*1 Project company basis.

*2 Proved reserves and probable reserves , including reserves from projects currently under development.
(Please refer P84 about our reserve standard.)

*3 JX Group's equity basis

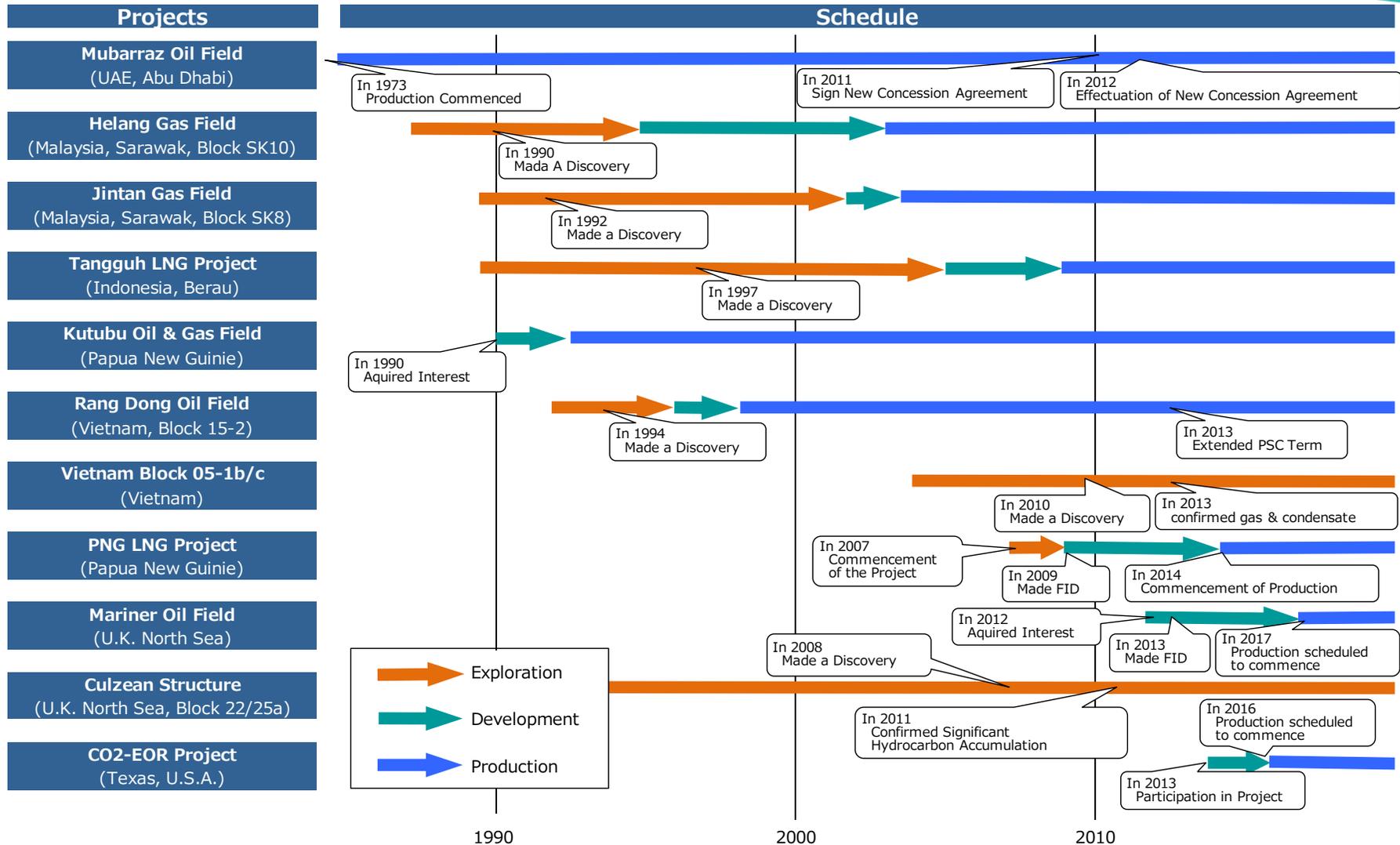
Maintain and Expand Production Volume over the Medium/Long Term

Latest Results

	Country(Block)	Type	Acquisition of Working Interest	Discovery of oil & gas strata	Final Investment Decision	Renewal of Contract	Commencement of Production
May. 2013	Australia (Finucane South Oil Field)	Crude Oil					●
Jun. 2013	Australia(WA-320-P) (WA-155-P2)	Natural Gas	●				
Jun. 2013	Vietnam(05-1b/c)	Oil / Gas		●			
Jul. 2013	Australia(WA-49-R)	Natural Gas		●			
Sep. 2013	Malaysia(Deepwater 2F)	Natural Gas	●			2020~2025	
Nov. 2013	Vietnam(15-2)	Crude Oil				●	
Dec. 2013	Malaysia(Deepwater 3F)	Crude Oil	●		●		
May. 2014	Malaysia (Layang Oil/Gas Field)	Oil / Gas			●		
Apr. 2014	PNG LNG Project	Natural Gas	●				●
Jul. 2014	USA (CO2-EOR)	Crude Oil	●				
Aug. 2014	Australia(WA-435/437-P)	Oil / Gas		●			
Aug. 2014	Vietnam(05-1b/c)	Oil / Gas		●			
Dec. 2014	UK(Acquisition of Oil Fields)	Oil / Gas	●				
Dec. 2014	UK(Kinnoull Oil Field)	Oil / Gas					●



Production Schedule of Principal E&P Projects





Strategies of Metals Business

Strategy and Action Plan Resource Development

Business Environment	<ul style="list-style-type: none"> Copper demand increases centered on Asia. Copper price stays at high level
Basic Strategy	Establishing highly profitable structure by enhancing copper mine interest

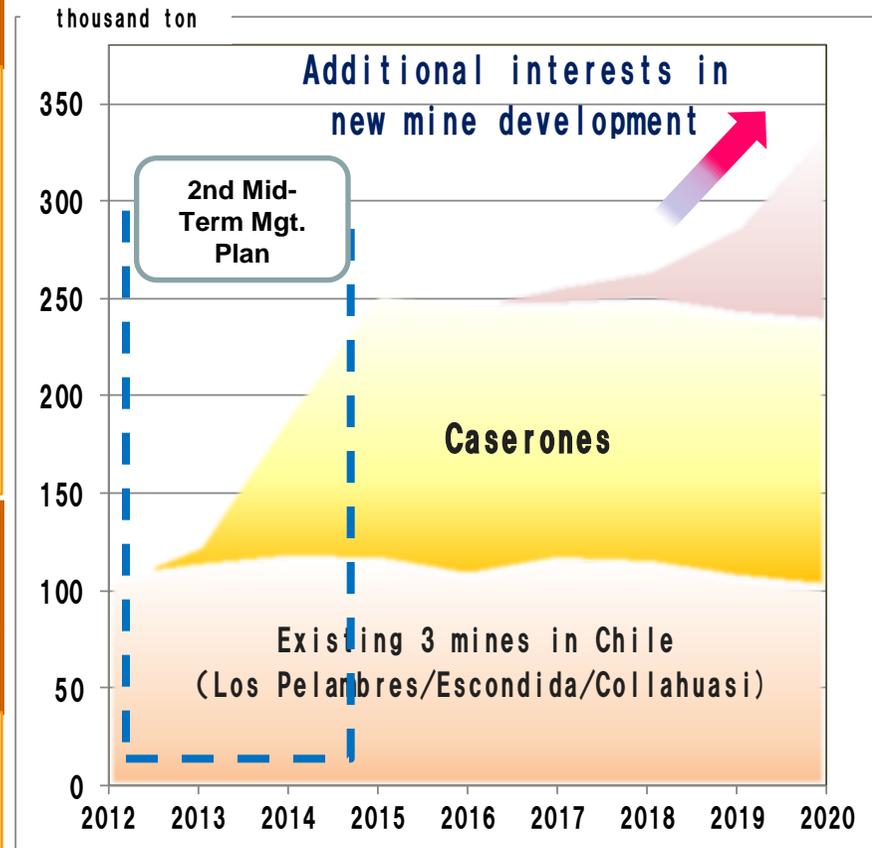
- Aiming 350 thousand ton per year of copper mine interest
 - Caserones : Jan. 2014 - Start production of copper concentrate
 - Reconsidering Quechua (Peru) development
 - Promoting exploring Frontera(Chile)

	2006	07	08	09	10	11	12	13	14	15	16
Caserones	●	●	●		●			→	→	→	→
	Acquired interest	Started FS	FID		Start production				Until 2040		
Quechua	●	●	→								
	Acquired interest	Started FS	Finished FS						(Considering development)		
Frontera							●				
							Acquired interest				(Additional exploring)

Business Environment	Capital intensification and oligopolization of resource developers proceeds more challenging technology and funds for mine development
Basic Strategy	Acquiring mining interest utilizing original technology

- Developing next-generation smelting technology
 - Nikko Chloride Process (N-Chlo Process): Continuing study for commercialization of achievement at pilot plant in Australia
 - Bio mining : Agreed commercial application of the technology at CODELCO's Radomiro Tomic copper mine in Chile (Aug. 2014)

Copper mine interest





Smelting & Refining

Business Environment

Drastic improvement of TC/RC is hardly expected though mine development proceeds.

Basic Strategy

Establish business structure that has world top-class cost competitiveness

- Safe and stable operation
- Improving smelting margin
 - Improving production efficiency using copper concentrate from Caserones.
 - Using high margin materials.
 - Starting 2 operation of 2nd copper concentrate and sulfuric acid careers.

Electronic Materials

Business Environment

Electronic materials demand increases in cutting-edge IT, automobile, medical fields etc.

Basic Strategy

Securing world's top share in each product market

- Realizing early monetization of integrated connector production business (2013.4 Kakegawa Works start operation) and cathode materials business for lithium-ion batteries
- Improving profitability by developing new fields and materials
 - Ultra-thin electro-deposited copper foil, High-functional precision rolled products, Sputtering target for OLED, Sputtering targets for next generation LSIs, Materials for ray sensor

Recycling & Environmental Services

Business Environment

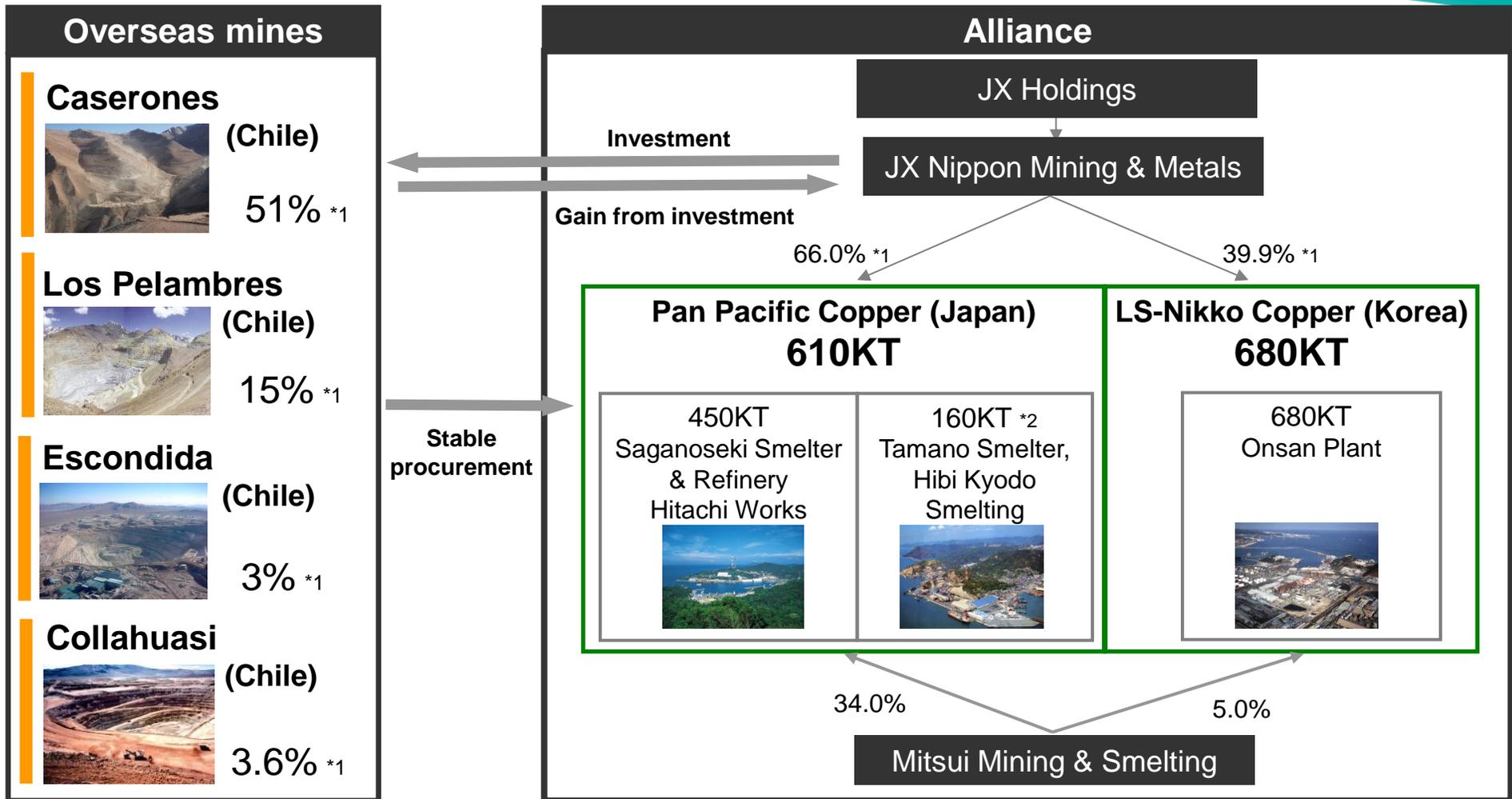
Demand for related materials and resource recycling expands in line with growing concerns for eco social needs

Basic Strategy

Building international resource recycling business with environmental-friendly zero emission system

- Enhancing collecting ability of recycled materials overseas : Development to US market
- Enhancing new business : Recycling lithium-ion batteries. Detoxication of materials containing low-concentrated PCB
- Consolidating production site metal by metal and cost reduction

Copper Business



*1. Shares indirectly owned by JX Nippon Mining & Metals

*2. Total Capacity is 260KT. PPC has 63.51% equity.

Overseas Copper Mine Development ①

Caserones Copper Mine (Chile)



Acquisition date **May 2006**

Acquisition price **\$137 million**

Initial investment **\$ 4.20 billion**

In July 2011, project finance(\$1.1billion) and long-term loan(\$0.3billion) were concluded.

Ownership (As of Dec. 2014)

Pan Pacific Copper (PPC)* 77.37%

* Jointly established by JX Nippon Mining & Metals (66%) and Mitsui Mining & Smelting (34%)

Mitsui & Co., Ltd. 22.63%

Mine life **From 2013 to 2040 (28 years)**

Total production (28years)

Copper : 3,550kt From Copper Concentrate 3,140kt

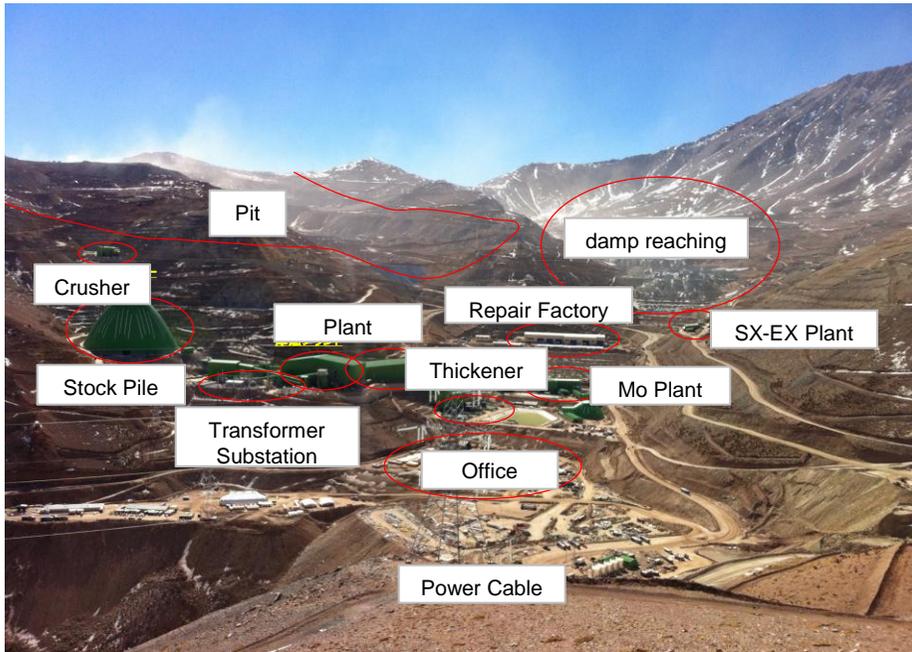
From SX-EW Process 410kt

Molybdenum : 87kt

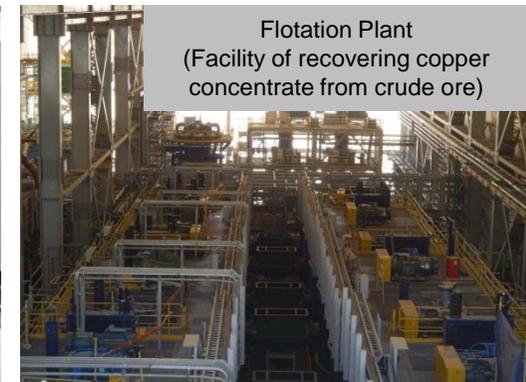
Production plan

In Mar. 2013, started to SX-EW Copper Cathode Production

In May. 2014, started to Copper Concentrate Production



		first 10 years	average (28years)	total (28years)
Copper	Copper Concentrate	150 kt/year	110 kt/year	3140 kt
	SX-EW Process	30 kt/year	10 kt/year	410 kt
	total	180 kt/year	120 kt/year	3550 kt
Molybdenum		3 kt/year	3 kt/year	87 kt



Ownership

NGEx Resources Inc. (Canada) : 60%

Pan Pacific Copper (PPC) : 40%

*PPC is Jointly established by JX Nippon Mining(66%) and Mistui Mining & Smelting(34%)

September 2012, PPC acquired 40% exploration rights from JOGMEC (Japan Oil, Gas and Metals National Corporation)

Exploration results for Los Helados

Existence of copper-gold deposit had been confirmed at the time of PPC's acquisition in 2012 through exploratory drilling since 2004.

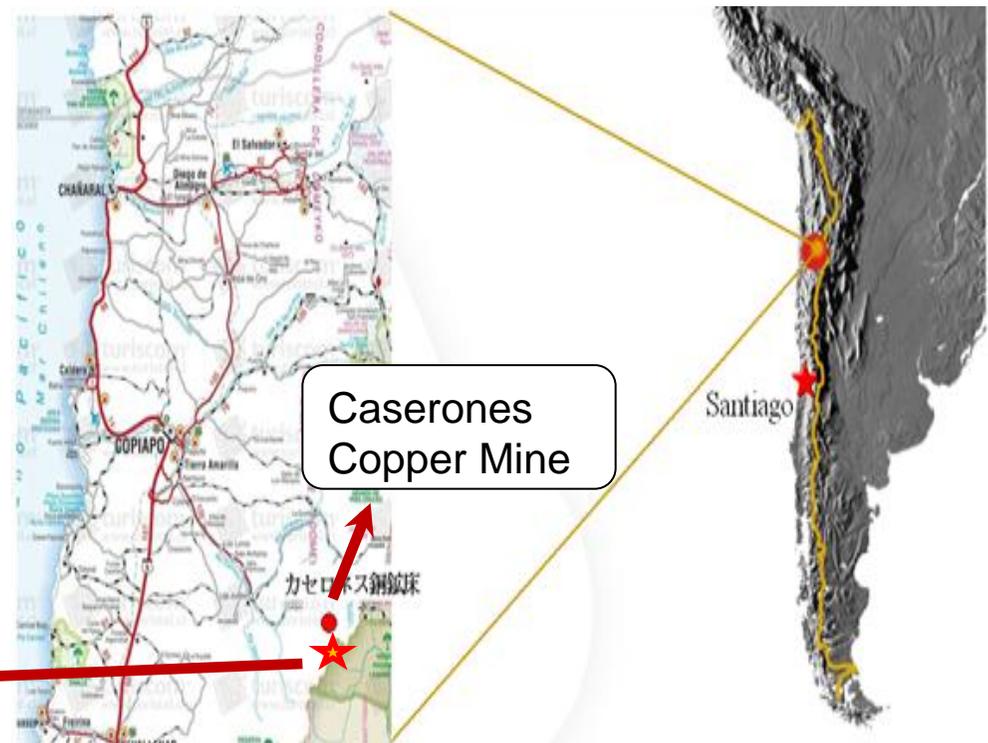
Exploratory works continued after 2012 and preliminary engineering study and economical evaluation have been completed.

Frontera Area Dimension : 24,000ha
Altitude : 4,400-4,900m

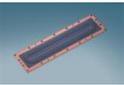
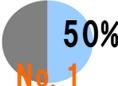
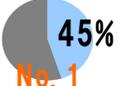
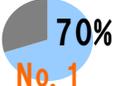
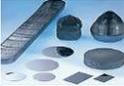
Main deposits

Los Helados (Chile, 20km south of the Caserones Copper Mine)

*Filo del Sol (Argentina) October 2014, PPC agreed to transfer all of its exploration rights to NGEx



Electronic Materials

Main products	Global market share	Primary applications	End-use applications				
			PCs	Mobile phones / Smart phones	Digital, Avs	Telecom infra	Auto mobiles
 Treated rolled copper foil	 70% No. 1	Flexible printed circuit boards	○	⊙	⊙		○
 Semiconductor targets	 60% No. 1	CPUs, memory chips, etc.	⊙	○	⊙	○	○
 ITO targets for FPDs *	 30% No. 1	Transparent electrodes	⊙	○	⊙		
 HD media targets	 50% No. 1	HDD (Hard disk drives), etc.	⊙	○			
 Phosphor bronze	 20% No. 1	Connectors	⊙	○	○		○
 Corson alloy (C7025)	 45% No. 1	Lead frames, Connectors	⊙	○	○		○
 Titanium copper alloy	 70% No. 1	High-class connectors, etc.	○	⊙	○		
 In-P compound semiconductors	 50% No. 1	Optical communication devices High-speed IC			○	⊙	○

* Flat Panel Displays

Electronic Materials (Kakegawa Works)

✓ Expansion of Automotive Related Business

- Eco-friendly car market which is applying full of environmental technology has a high potential of growth in near future.
- Demand for connectors used in electric components of eco- friendly car is expected to expand further.



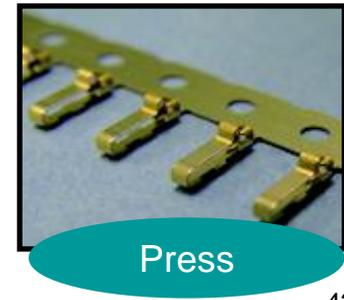
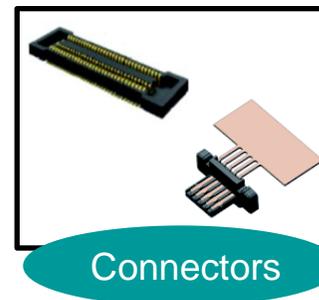
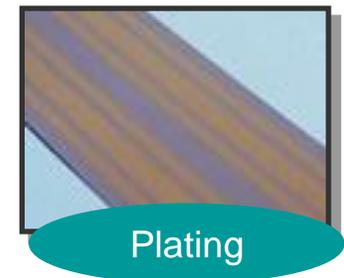
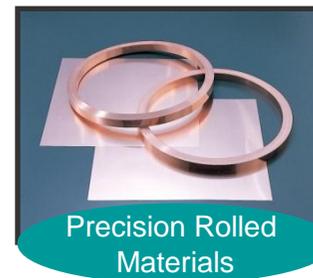
✓ OEM Construction of Integrated Plant of Connector (Kakegawa Works)

- Decided to construct a new plant in Kakegawa with integrated production system (press, plating and assembly) for connector (Feb. 2011).
- Started operation (Apr. 2013) .

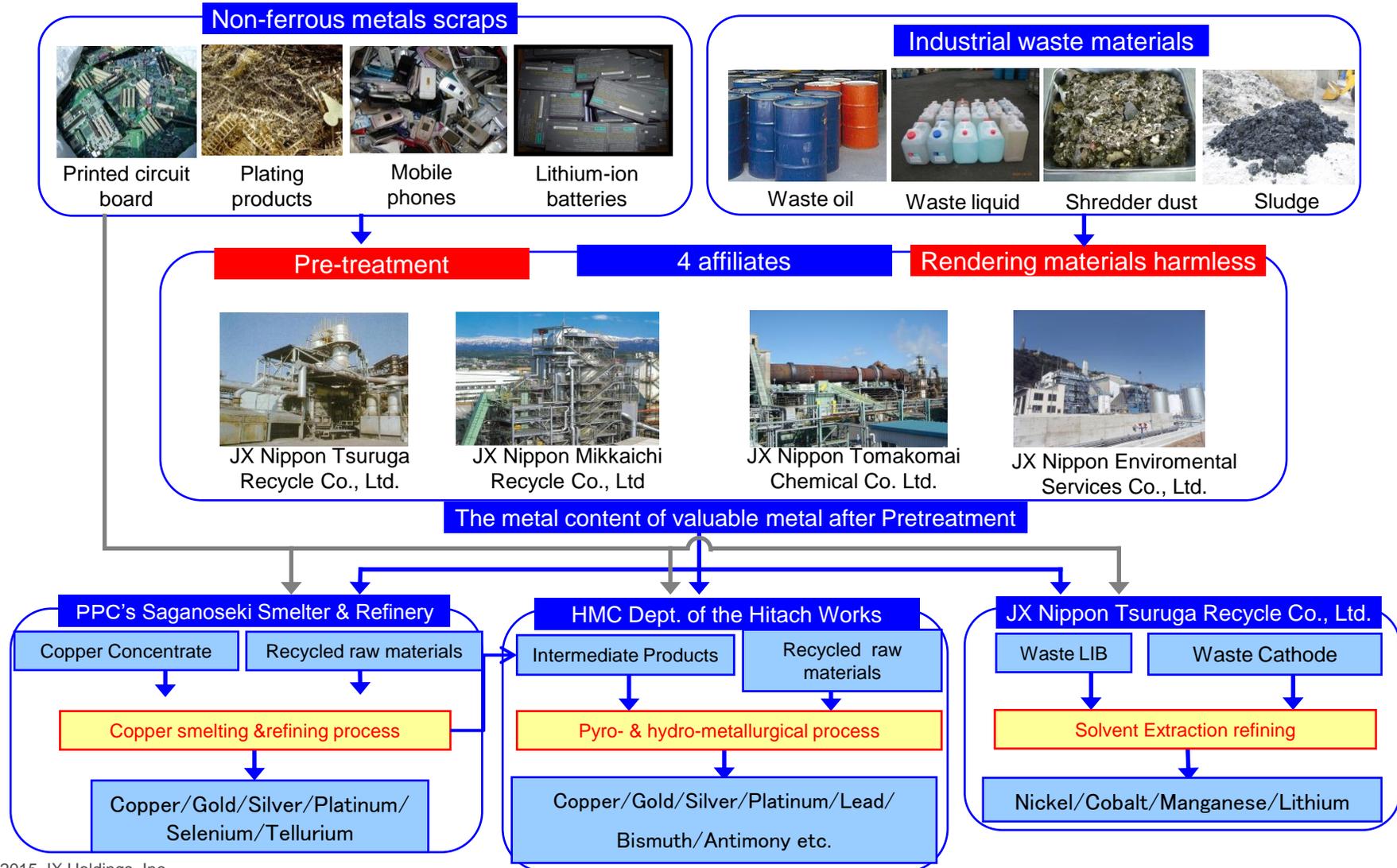


✓ Integrated Production System of Connector and Precision Materials

Process Use・Product	Press	Plating	Assembly
Connector for Automobile etc.	Kakegawa Works		
Connector for IT etc.	Nasu Works	Esashi Works Tatebayashi Works	Nasu Works



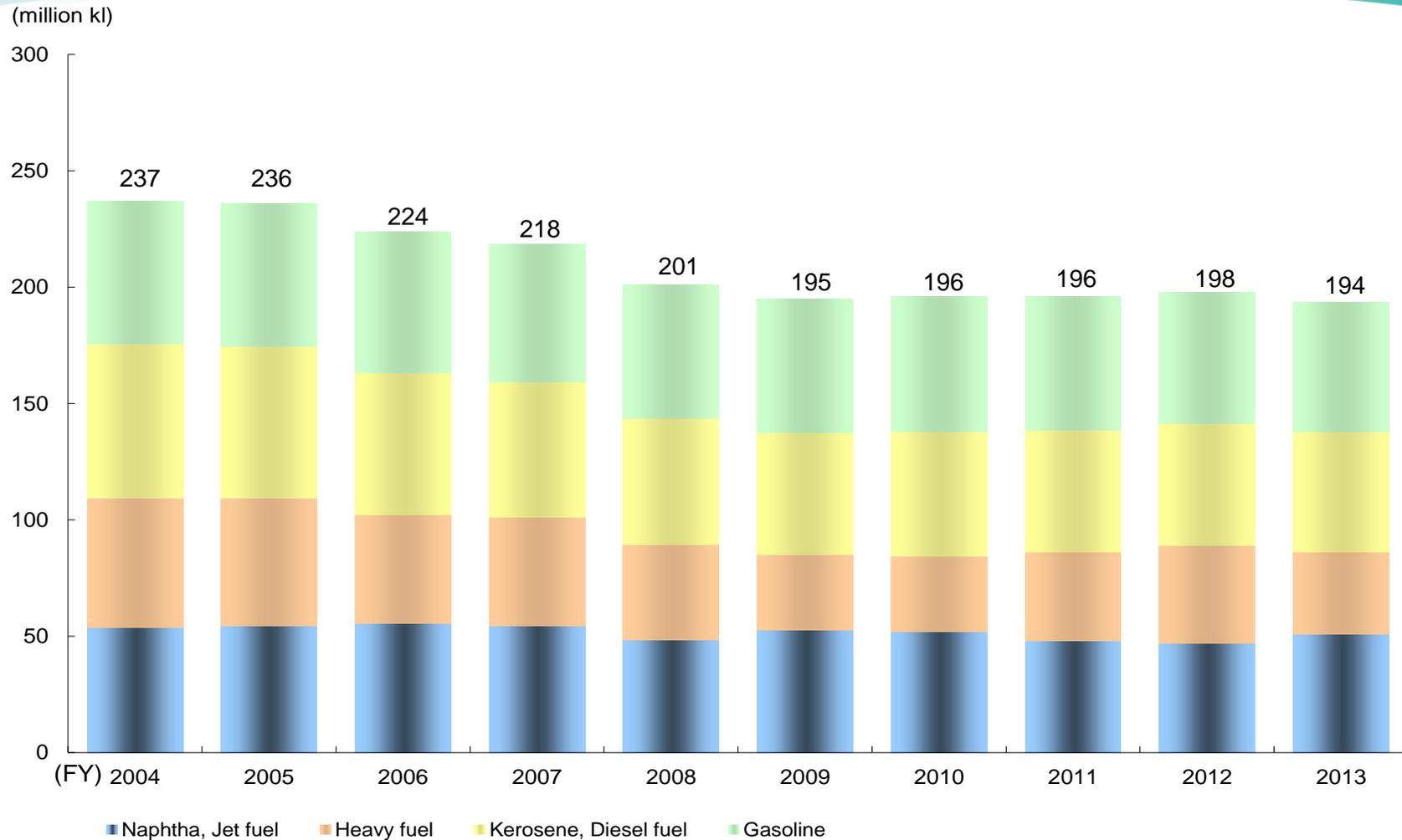
Recycling and Environmental Services



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Business Environment and Data - Energy Business -

Demand for Petroleum Products (Japan)



Note: Excluding Crude Oil for electric power plants.

Source: Petroleum Association of Japan and Company data

Capacity Reduction Plan, Integration Synergies, Enhanced Efficiency of Refineries

✓ Capacity Reduction Plan

(JX)

Dec.2008. Apr. 2014. *
1,790 ⇒ 1,210 thousand BD

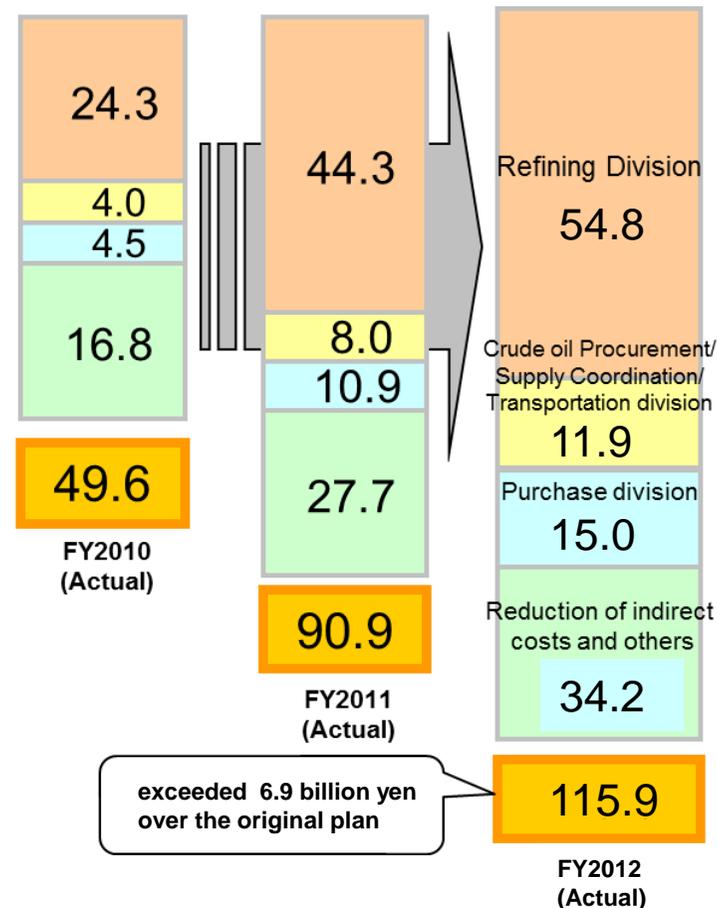
(Japan)

Dec.2008. Apr. 2014. *
4,830 ⇒ 3,730 thousand BD

	Refinery	Due Date	Reduction Capacity	Completion
STEP1	Toyama	March, 2009	(60) thousand B/D	✓
	Kashima	May, 2010	(21)	✓
	Oita	May, 2010	(24)	✓
	Mizushima	June, 2010	(110)	✓
	Osaka	October, 2010	(115) Convert to exportation refinery	✓
	Negishi	October, 2010	(70)	✓
Subtotal			(400)	
STEP 2	Muroran	March, 2014	(180)	✓
Total			(580)	

Corresponded to Sophistication of Energy Supply Structure Act

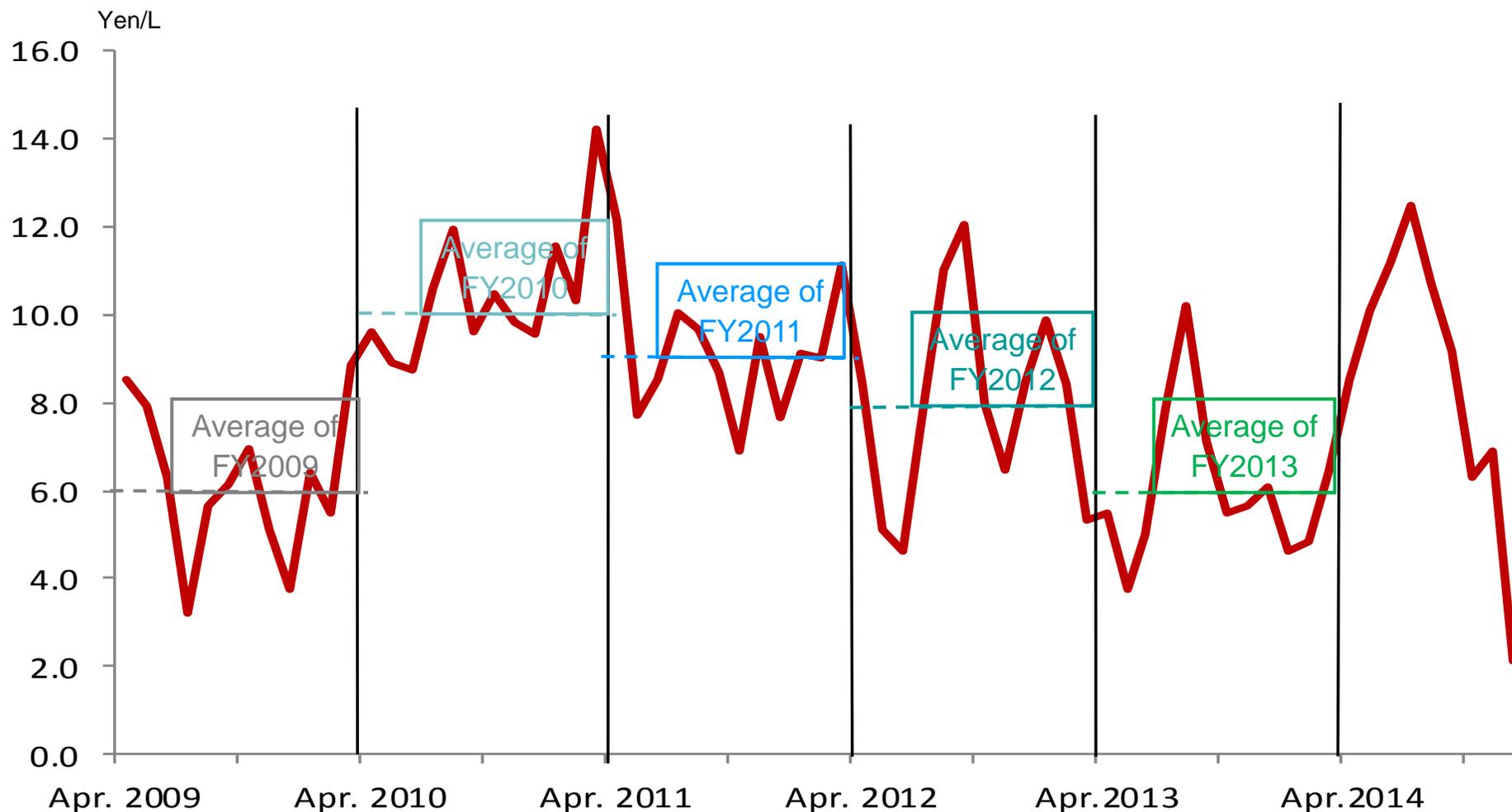
✓ Integration Synergies and Enhanced Efficiency of Refineries



(billion yen; Accumulated effect vs. FY2009)

* Excludes Osaka International Refining Company, Limited, and the Mizushima refinery and Kashima refinery condensate splitters.

Margins* of Gasoline, Kerosene, Diesel Fuel and Fuel Oil A



* Margin = Spot Price – All Japan Crude Oil CIF (including petroleum tax and interest)

JX Group's Market Share and Demand in Japan, Historical CDU^{*1} Utilization Rate

Domestic Market Share

	FY2013 3Q(Apr.-Dec.) (%)	FY2013 (%)	FY2014 3Q(Apr.-Dec.) (%)
a) Gasoline	34.1	34.1	33.4
b) Kerosene	41.4	41.5	36.7
c) Diesel Fuel	38.7	38.7	36.3
d) Fuel Oil A	44.8	44.3	39.3
a+b+c+d	37.4	37.6	35.2
Total Domestic Fuel ^{*2}	36.6	36.9	34.6

Domestic Demand

	FY2013 3Q(Apr.-Dec.) (1,000KL)	FY2013 (1,000KL)	FY2014 3Q(Apr.-Dec.) (1,000KL)	Changes vs. FY2013 3Q(Apr.-Dec.) (%)
a) Gasoline	42,222	55,419	40,354	95.6
b) Kerosene	10,073	17,894	9,376	93.1
c) Diesel Fuel	25,517	34,079	25,217	98.8
d) Fuel Oil A	9,263	13,438	8,566	92.5
a+b+c+d	87,075	120,830	83,513	95.9
Total Domestic Fuel ^{*2}	140,290	193,520	132,175	94.2

^{*1} CDU Utilization Rate (Excluding the impact of periodic repair and earthquake)

	FY2011	FY2012	FY2013	FY2014 1Q	FY2014 2Q	FY2014 3Q
JX Group ^{*3}	88%	88%	89%	93%	88%	91%

*1 Crude Distillation Unit

*2 Excluding crude oil for electric power plants

*3 Excluding condensate splitters of Mizushima and Kashima

Source: Petroleum Association of Japan and Company data

Number of Service Stations (Fixed-Type)

(As of the end of fiscal years)

	FY2011	FY2012	FY2013	FY2014.12
JX Group	11,730	11,283	11,017	10,855
EMG ^{*1}	3,773	3,475	3,379	3,524
Idemitsu Kosan	3,997	3,861	3,786	3,743
Showa Shell Sekiyu	3,760	3,555	3,442	3,339
Cosmo Oil	3,498	3,325	3,228	3,169
Others ^{*2}	1,160	1,130	1,096	838
Oil Companies	27,918 (75.7%)	26,629 (74.8%)	25,948 (74.6%)	25,468 (74.5%)
Private Brands and Others ^{*3}	8,982 (24.3%)	8,971 (25.2%)	8,852 (25.4%)	8,732 (25.5%)
Total ^{*3}	36,900	35,600	34,800	34,200

Notes:

*1. Figures are total of Esso, Mobil and Tonen General Sekiyu until FY2013.

Only FY2014.12, figures are total of Esso, Mobil, Tonen General Sekiyu and Mitsui Oil & Gas.

*2. Figures are total of Taiyo Petroleum, Kygnus Sekiyu and Mitsui Oil & Gas until FY2013.

Only FY2014.12, figures are total of Taiyo Petroleum and Kygnus Sekiyu.

*3. Estimated by JX Holdings.

*4. Figures include only self-service retail outlets that are affiliated to oil companies.

<Number of Company-Owned Service Stations>

	FY2011	FY2012	FY2013	FY2014.12
JX Group	2,573	2,487	2,433	2,412

<Number of Self-Service Stations>

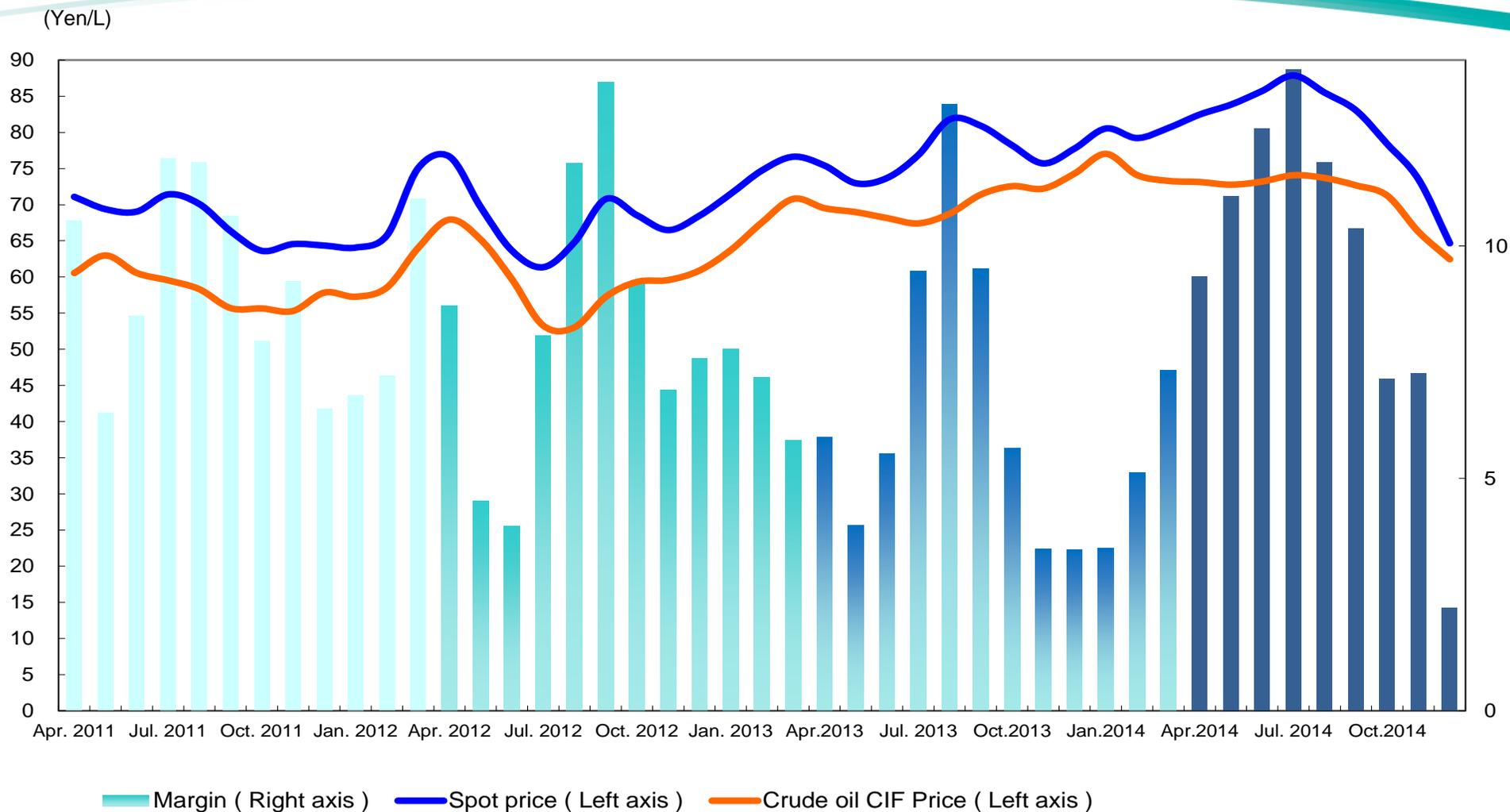
	FY2011	FY2012	FY2013	FY2014.12
JX Group	2,423	2,535	2,654	2,741
Total for Japan ^{*4}	7,001	7,172	7,415	7,588

Sales Volume by Product

	FY2013 3Q(Apr.-Dec.)	FY2014 3Q(Apr.-Dec.)	variation	Changes vs. FY 2013 3Q(Apr.-Dec.)
	ten thousand KL	ten thousand KL	ten thousand KL	
Gasoline	1,441	1,346	-95	-6.6%
Premium	177	159	-18	-10.2%
Regular	1,257	1,180	-77	-6.1%
Naphtha	310	270	-40	-12.9%
JET	124	126	2	1.6%
Kerosene	382	312	-70	-18.3%
Diesel Fuel	986	915	-71	-7.2%
Fuel Oil A	415	336	-79	-19.0%
Heavy Fuel Oil C	574	495	-79	-13.8%
For Electric Power	405	343	-62	-15.3%
For General Use	169	152	-17	-10.1%
Total Domestic Fuel	4,232	3,800	-432	-10.2%
Crude Oil	293	180	-113	-38.6%
Lubricants & Specialities	222	223	1	0.5%
Petrochemicals (ten thousand ton)	475	437	-38	-8.0%
Exported Fuel	875	699	-176	-20.1%
LPG (ten thousand ton)	26	23	-3	-11.5%
Coal (ten thousand ton)	501	503	2	0.4%
Total Excluding Barter Trade & Others	6,624	5,865	-759	-11.5%
Barter Trade & Others	1,417	1,497	80	5.6%
Total	8,041	7,362	-679	-8.4%



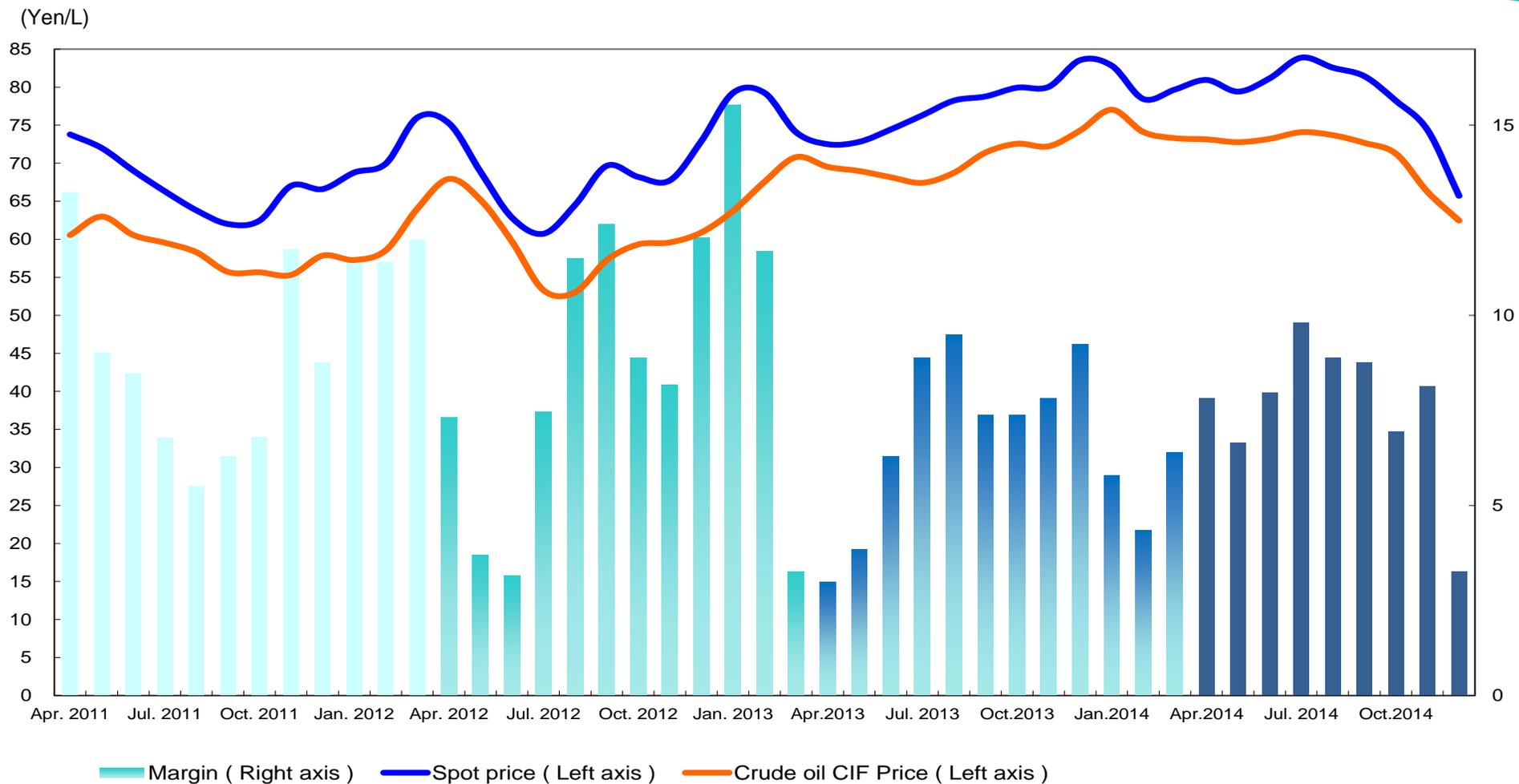
Domestic Market Margin* (Gasoline)



* Margin = Spot Price – All Japan Crude Oil CIF (including petroleum tax and interest) Source : Trade statistics (Ministry of Finance, Japan)



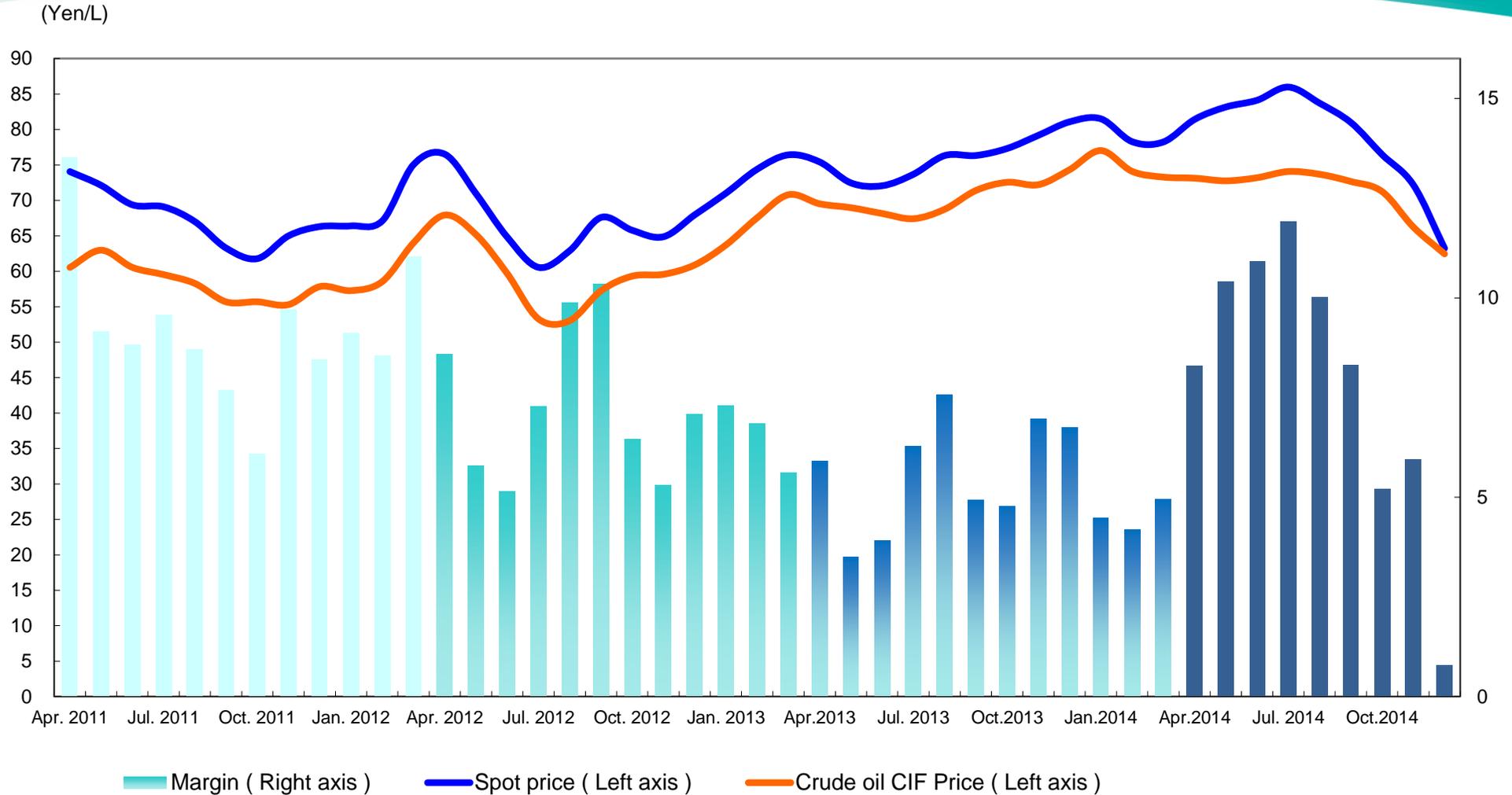
Domestic Market Margin* (Kerosene)



* Margin = Spot Price – All Japan Crude Oil CIF (including petroleum tax and interest) Source : Trade statistics (Ministry of Finance, Japan)



Domestic Market Margin* (Diesel Fuel)



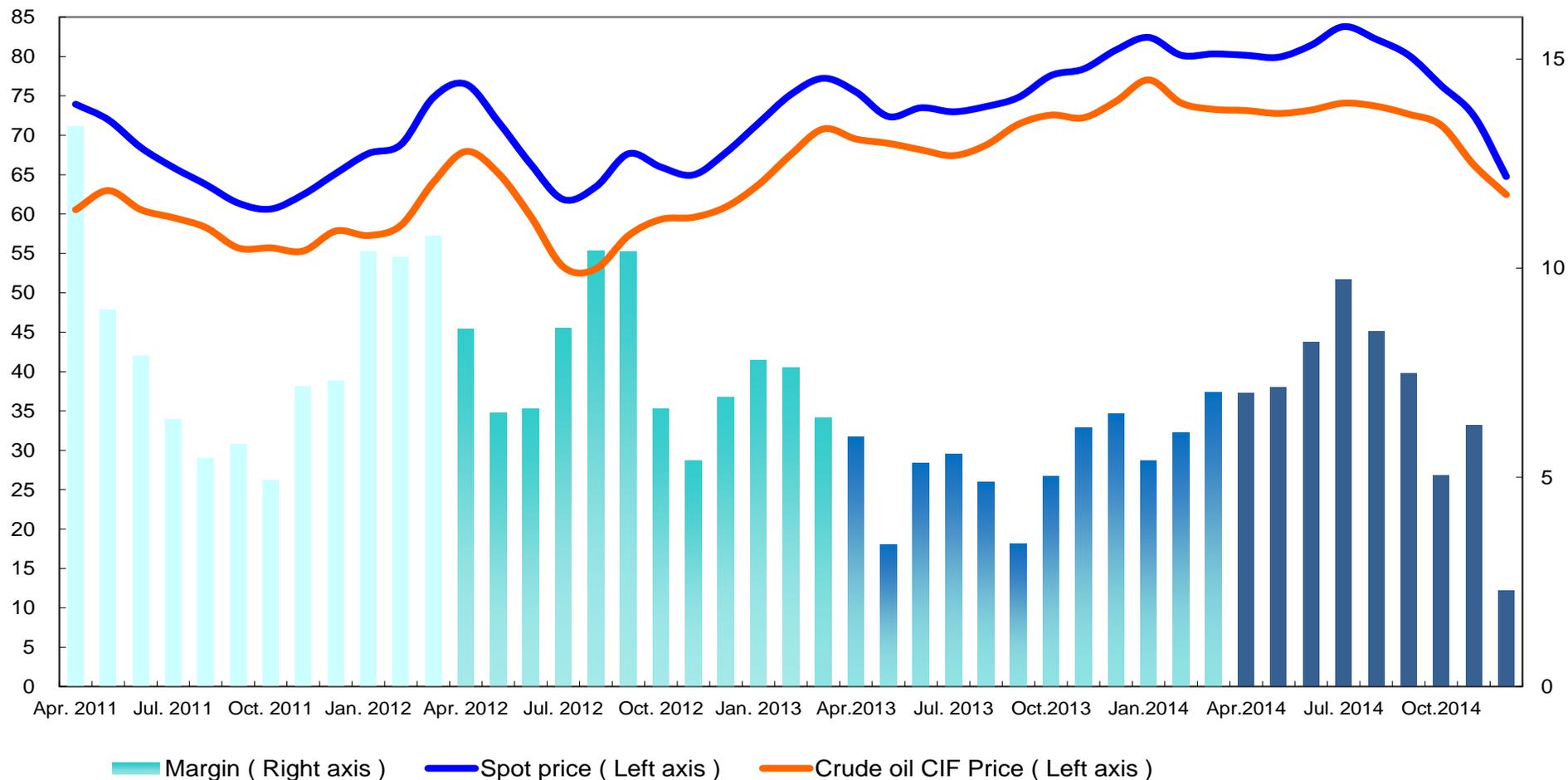
* Margin = Spot Price – All Japan Crude Oil CIF (including petroleum tax and interest)

Source : Trade statistics (Ministry of Finance, Japan)



Domestic Market Margin* (Fuel Oil A)

(Yen/L)



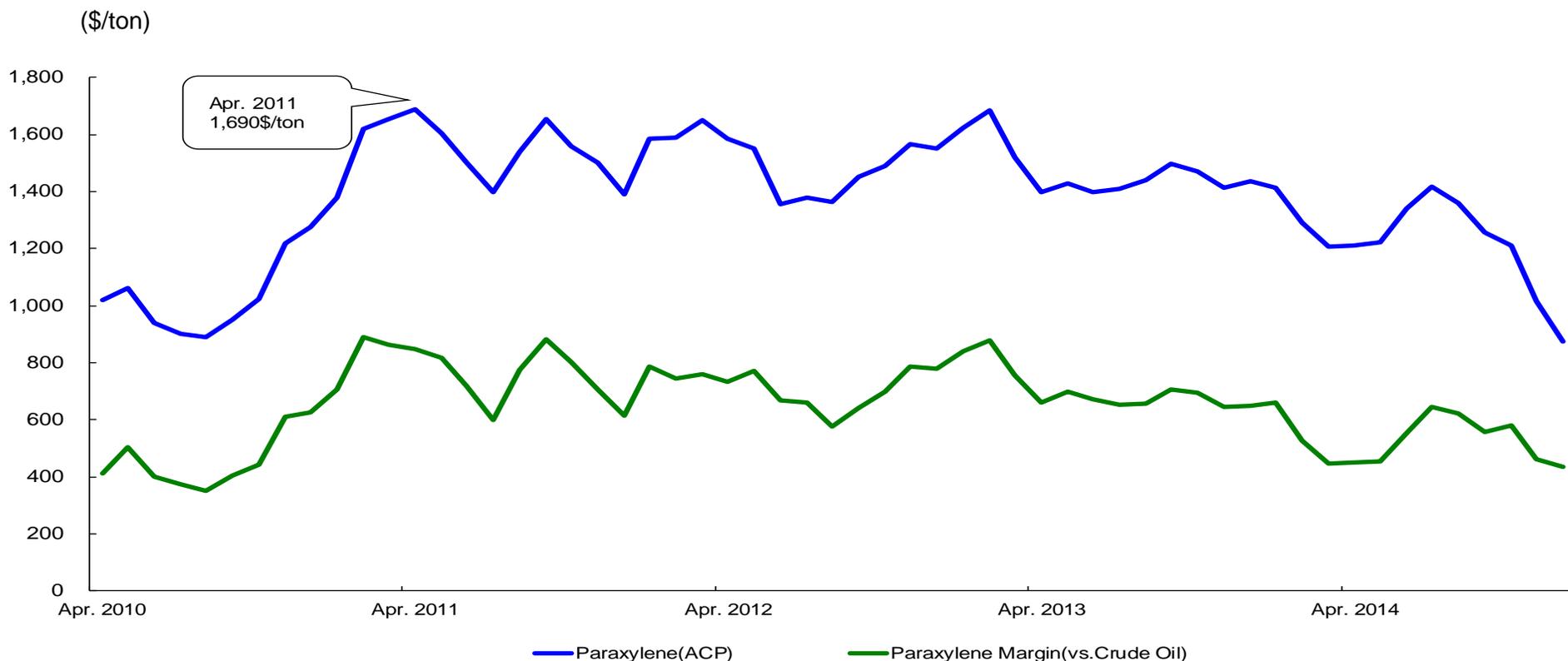
* Margin = Spot Price – All Japan Crude Oil CIF (including petroleum tax and interest)

Source : Trade statistics (Ministry of Finance, Japan)



Paraxylene Price and Margin (vs. Crude Oil)

Average Price	FY2010	FY2011	FY2012	FY2013					FY2014		
				1 Q	2Q	3Q	4Q	FY	1 Q	2Q	3Q
Asian Contract Price	1,162	1,555	1,510	1,409	1,449	1,440	1,304	1,401	1,259	1,345	1,033
Margin (vs. Crude Oil)	550	754	732	676	673	663	544	639	487	608	492



* In case of ACP undecided, average price of spot market is adopted.

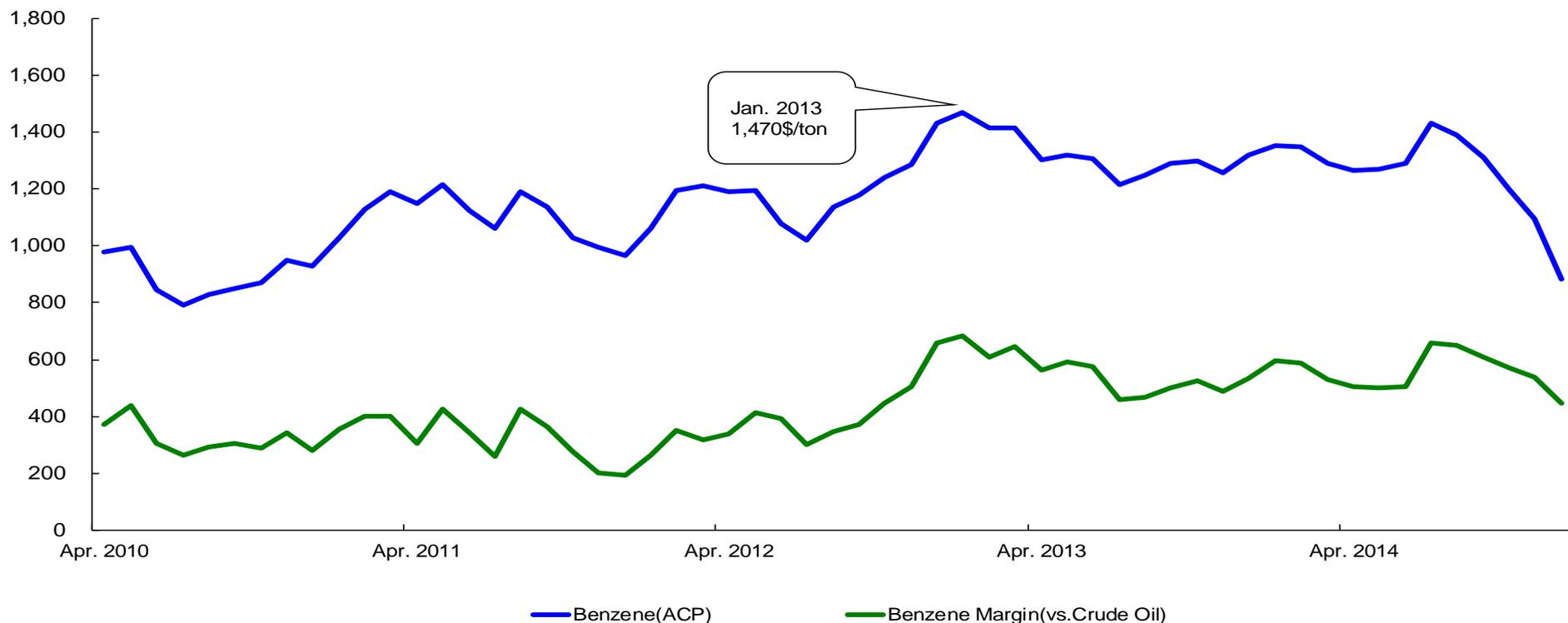


Benzene Price and Margin (vs. Crude Oil)

Average Price	FY2010	FY2011	FY2012	FY2013					FY2014		
				1 Q	2 Q	3 Q	4 Q	FY	1 Q	2 Q	3 Q
Asian Contract Price	948	1,111	1,255	1,309	1,252	1,293	1,331	1,296	1,274	1,377	1,060
Margin (vs. Crude Oil)	336	310	476	576	475	516	571	535	503	639	519

(\$/ton)

(\$/ton)



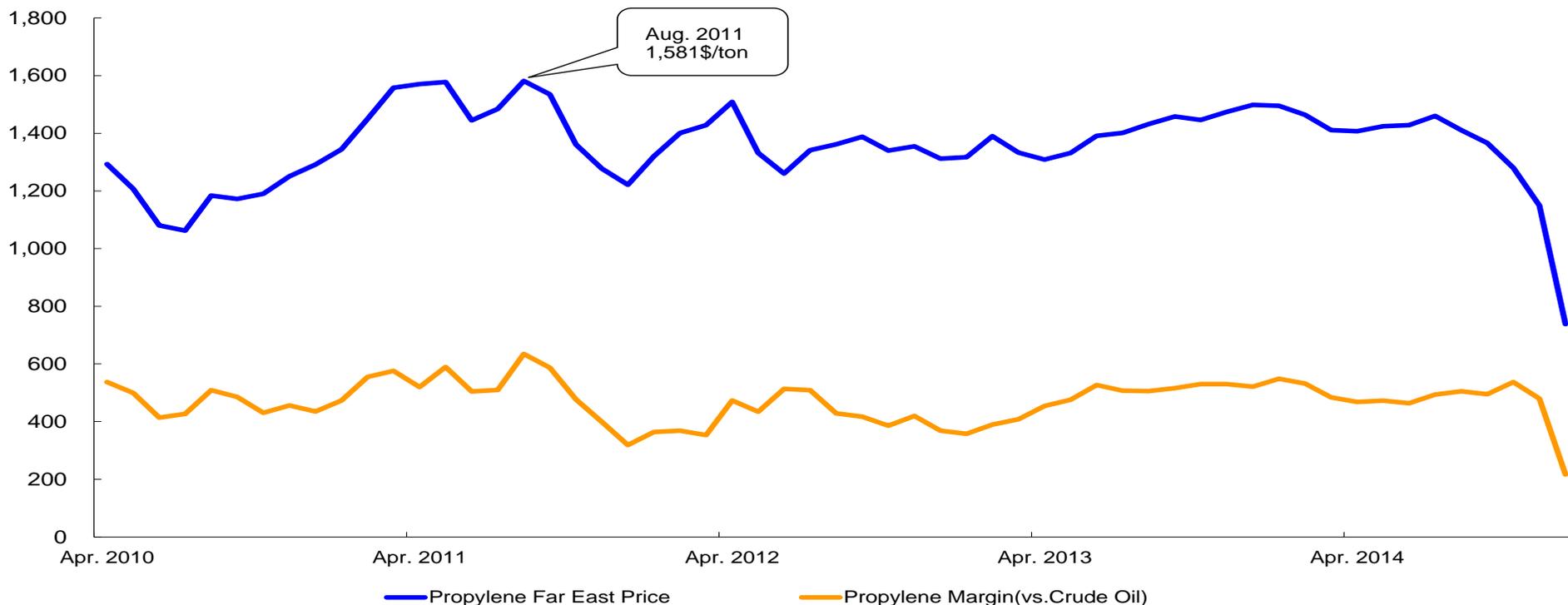


Propylene Price and Margin (vs. Naphtha)

(\$/ton)

Average Price	FY2010	FY2011	FY2012	FY2013					FY2014		
				1Q	2Q	3Q	4Q	FY	1Q	2Q	3Q
Far East Spot Price	1,258	1,383	1,353	1,344	1,430	1,473	1,457	1,426	1,420	1,412	1,056
Margin (vs. Naphtha)	484	362	426	486	510	527	522	511	468	498	411

(\$/ton)



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Business Environment
- Oil and Natural Gas E&P Business -



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Oil and Natural Gas E&P Business

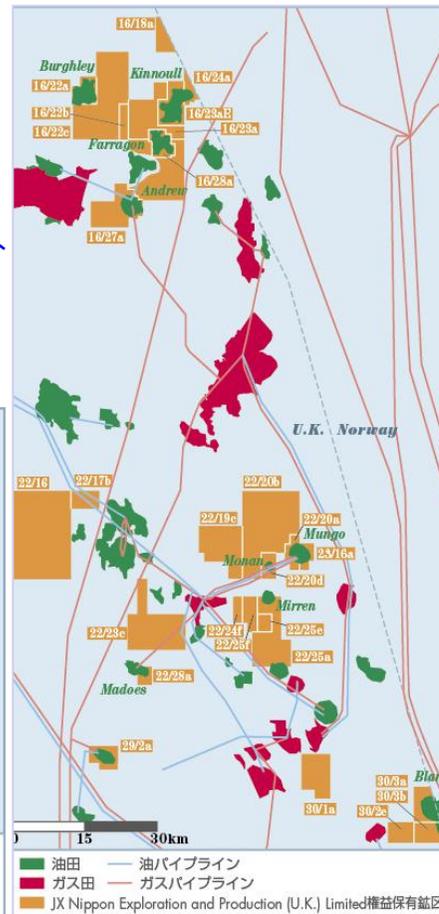
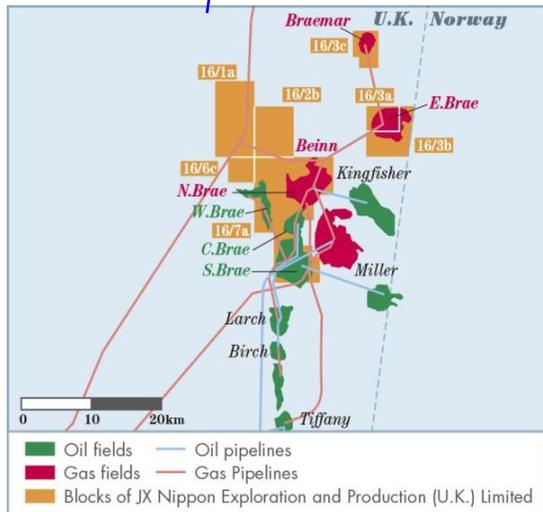
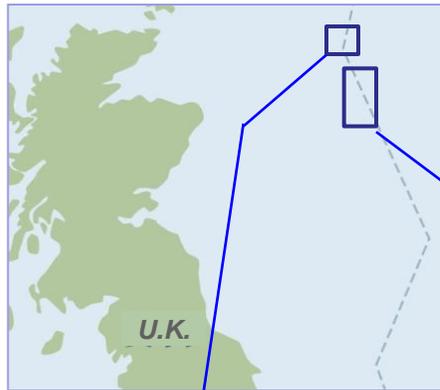
Principal Individual E&P Project Overview (U.S.①)

Principal Individual E&P Project Overview (U.K. ①)

U.K. North Sea ①

Production

Exploration



	Brea, Andrew, Blane, Kinnoull and other fields	Culzean Structure
Company Holding the Acreages	JX Nippon Exploration and Production (U.K.) Ltd.	
Shareholders (Holding Percentages)	JX Nippon Oil & Gas Exploration (100%)	
Project Status	Exploration/Production	Exploration
Interest	4.0%~100.0%	34.01%
Partners	BP, Shell, Marathon and others	Maersk(49.99%) BP(16.00%)
Operator	BP, Shell, Marathon and others	Maersk
Sales Volumes (Jan. ~Sep. 2014)	8,200 boed (oil 7,000b/d, gas 7.3mmcf/d)	

UK (North Sea) is one of core countries with many opportunities to acquire exploration, development and production assets and the infrastructure related to them. We have over 10 fields currently producing oil and gas as well as several projects underway where development is envisaged to commence within the next few years. We are striving to acquire new acreages through open bid rounds as well as pursuing farm in and other opportunities.

Production

Mining Area during the production Andrew, Kinnoull, Brae, Mirren / Madoes, Blane Oil and Gas Fields etc

- From 1994 to 2002, acquired a working interest in individual blocks.
- In December 2012, acquired some interest in production of plural assets from ENI.
- In December 2014, Kinnoull started production

Exploration

Mining Area during Exploration 22/25a (Culzean Prospect) etc

- In March 2011, confirmed the presence of a significant hydrocarbon accumulation.
- In December 2012, acquired the additional interest from ENI.

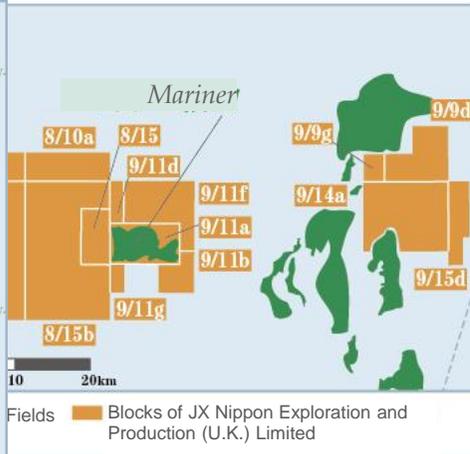
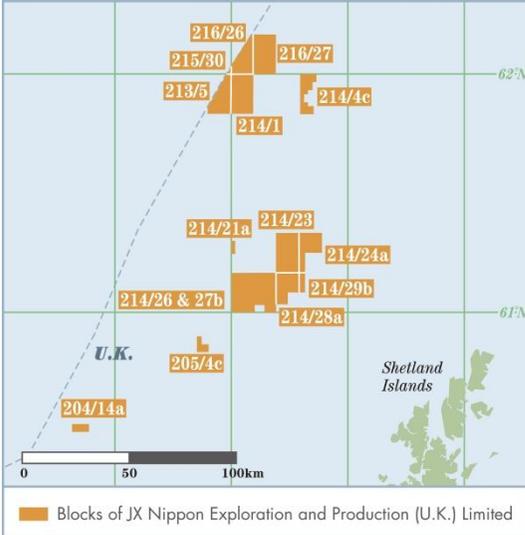
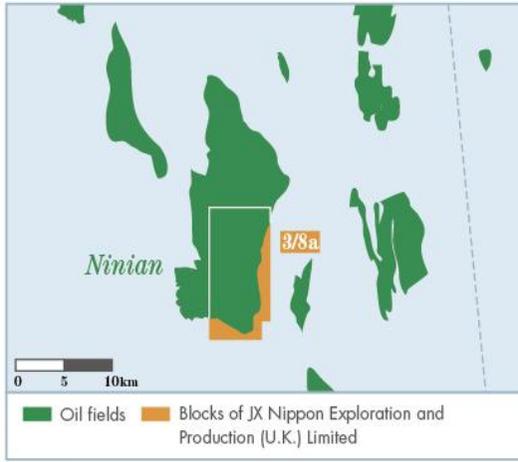
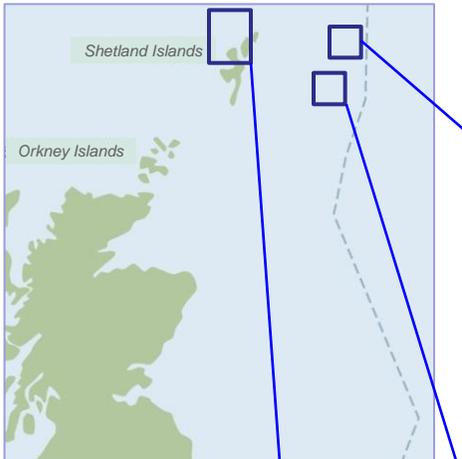
Principal Individual E&P Project Overview (U.K. ②)



U.K. North Sea ②

Development

Exploration



	Mariner Field	Ninian Field	Exploration Areas
Company Holding the Acreages	JX Nippon Exploration and Production (U.K.) Ltd.		
Shareholders (Holding Percentages)	JX Nippon Oil & Gas Exploration (100%)		
Project Status	Development	Production	Exploration
Interest	28.89%	12.94%	17.5%~55%
Partners	Statoil (65.11%) Dyas (6.00%)	CNR(87.06%)	OMV、GDF他
Operators	Statoil	CNR	JXNEPUK、OMV、GDF and others

Development

Mining Area during Development : Mariner Oil Field

- In December 2012, acquired the explorational interest of Mariner Oil Field from ENI.
- In February 2013, decided to develop.
In 2017 Production scheduled to commence.

Exploration

Mining Area during Exploration West of Shetlands Area

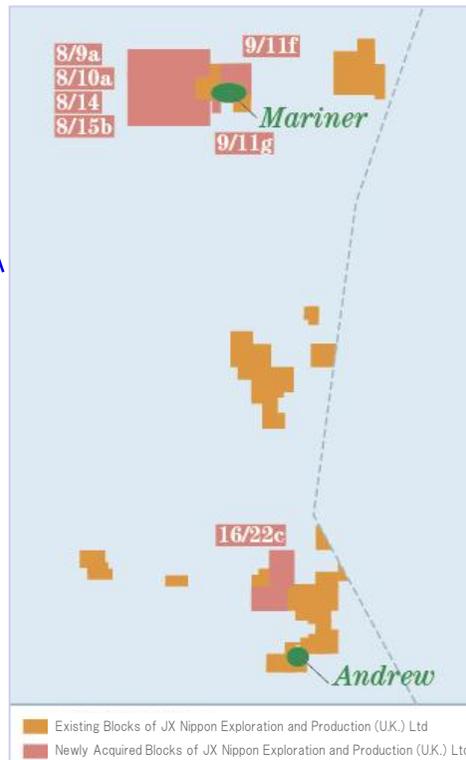
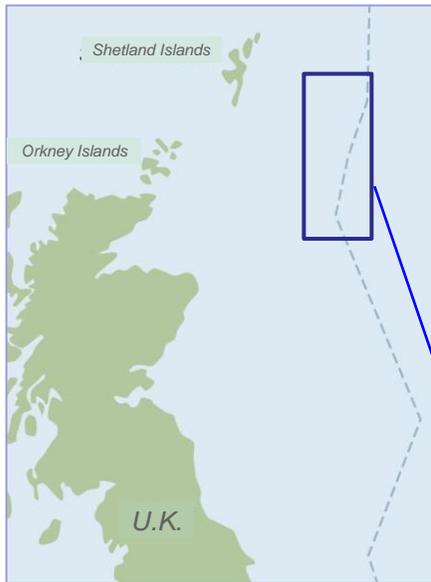
- In October 2012, new blocks are acquired by 27th round of governmental open tender.

Principal Individual E&P Project Overview (U.K. ③)

U.K. North Sea ③

Exploration

New blocks are acquired in 2014 by 28th round of governmental open tender .



	North Sea Central Area	North Sea Northern Area
	16/22c	8/9a, 8/10a, 8/14, 8/15b, 9/11f, 9/11g
Company Holding the Acreages	JX Nippon Exploration and Production (U.K.) Ltd.	
Shareholders (Holding Percentages)	JX Nippon Oil & Gas Exploration (100%)	JX Nippon Oil & Gas Exploration (100%)
Project Status	Exploration	
Interest	30.00%	28.89%
Partners	BP (70.00%)	Statoil (65.11%)
		Dyas (6.00%)
Operator	BP	Statoil

These areas are next to the Andrew oil field and developed Mariner oil field which are our main asset, in the case when oil and gas field were found, we expect developing cost reduction by using facilities in these oil fields.



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Oil and Natural Gas E&P Business

Principal Individual E&P Project Overview (U.K.①)

Principal Individual E&P Project Overview (U.S.①)

Gulf of Mexico

Production



We hold assets in the Gulf of Mexico in the United States, which range from the continental shelf (less than 200meters in depth) to deep water area (more than 200 meter in depth).

	K2 (offshore)	Orchard North (onshore)	MP140,ST179, WC265/266 (offshore)
Company holding the Acreage	JX Nippon Oil Exploration(U.S.A.) Ltd.		
Shareholders(Holding Percentages)	JX Nippon Oil & Gas Exploration(100%)		
Project Status	Production	Production	Production
Interest	11.6%	50.0%	35.0%~62.5%
Partners	Anadarko(41.8%) ENI(13.4%) ConocoPhillips(12.4%) MCX(11.6%) EcoPetrol(9.2%)	Hilcorp (50.0%)	Fieldwood Dynamic Ranger Tarpon
Operator	Anadarko	Hilcorp	Fieldwood, Others
Sales Volumes(Jan.~Sep. 2014)	3,000 boed (Oil 2,000b/d、 Gas 6.3mmcf/d)		

Production

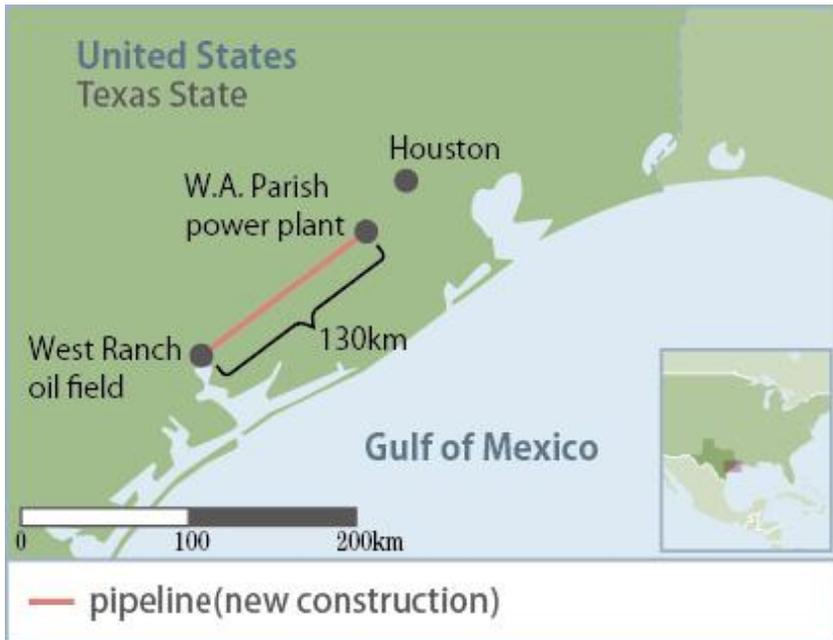
Mining Area during the productionK2, Orchard North, MP140, ST179, WC265/266

- In 1990, began exploration, development, and production operations at an onshore field in Texas and offshore blocks in both deep as well as shallow waters in the Gulf of Mexico.
- In addition to continuing such existing operations as those in the Orchard North Gas Field, Aconcagua Gas Field, and Virgo Gas Field, purchased interests in certain producing assets in the Gulf of Mexico from Devon in 2005 and from Anadarko in 2007.

Principal Individual E&P Project Overview (U.S.②)

Texas

Development



Constructing carbon capture system that captures 90% of carbon dioxide (CO₂) in the processed flue gas from an existing unit at the WA Parish power plant, and by pressing captured carbon dioxide in West Ranch oil field, trying to increase crude oil production.

EOR is expected to boost oil production at the field from around 500barrels per day to approximately 12,000 barrels per day (average for project terms).

	CO ₂ -EOR Project
Operating Company of JX NOEX	JX Nippon Oil Exploration (EOR) Ltd.
Shareholders (Holding Percentages)	JX Nippon Oil Exploration (U.S.A.) Ltd. (100%)
Project Status	Development
Interest	50.0%
Project Company	Petra Nova Parish Holdings LLC *

* A company half-funded by JX Nippon Oil Exploration (EOR) Ltd. and NRG Energy Inc. Group

Development

CO₂-EOR Project

- In July 2014, participated in CO₂-EOR business.
- In 4th quarter of 2014, scheduled to start production.

Principal Individual E&P Project Overview (Canada)

Canada

Production

Development



	Syncrude Project
Company Holding the Acreages	Japan Canada Oil/Mocal Energy
Shareholders(Holding Percentages)	JX Nippon Oil & Gas Exploration (100%)
Project Status	Development / Production
Interest	5.0%
Partners	Canadian Oil Sands (36.7%) Imperial Oil Resources (25.0%) Suncor Energy (12.0%) Sinopec (9.0%) Nexen (7.2%) Murphy Oil Company (5.0%)
Operator	Syncrude Canada
Sales Volume(Jan.-Sep. 2014)	12,300boed (oil 12,300b/d)

We are a partner in the Syncrude Project that produces synthetic crude oil from oil sand, the sand containing bitumen, huge deposits of which are found in Canada.

Production

- In 1978, Started Shipment of Synthetic Crude Oil.
- In 1992, acquired a working interest from PetroCanada.

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Oil and Natural Gas E&P Business

Principal Individual E&P Project Overview (Vietnam ①)

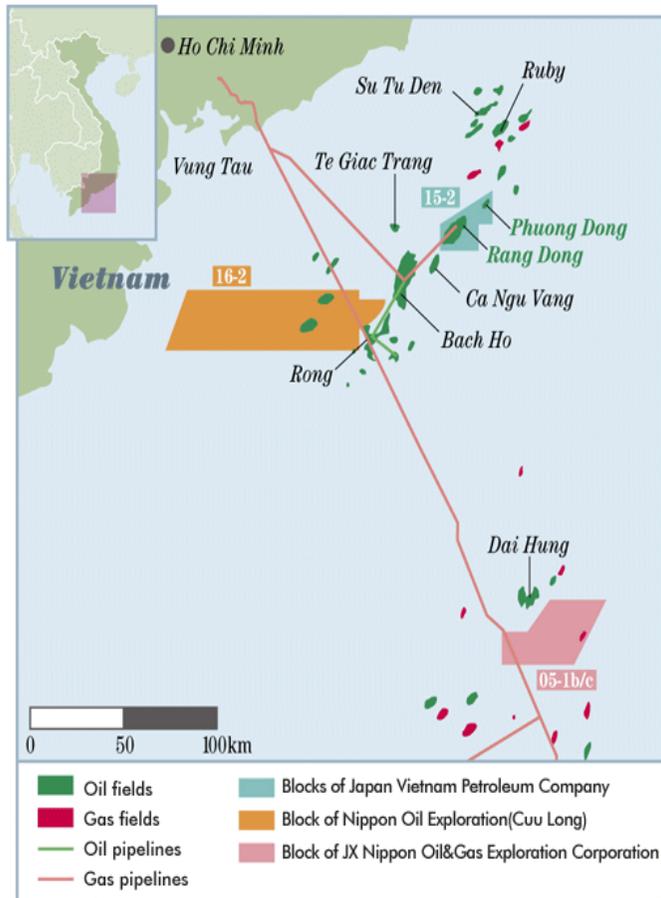
Principal Individual E&P Project Overview (Vietnam ①)

Vietnam

Production

Development

Exploration



	Block 15-2		Block 05-1b/c
	Rang Dong Oil Field	Phuong Dong Oil Field	
Company Holding the Acreages	Japan Vietnam Petroleum Company		JX Nippon Oil & Gas Exploration
Shareholders(Holding Percentages)	JX Nippon Oil & Gas Exploration (97.1%) Mitsubishi Corporation (2.9%)		-
Project Status	Exploration/Development/Production		Exploration
Interest	46.5%	64.5%	35.0%
Partners	PVEP (17.5%) Perenco (36.0%)	PVEP (35.5%)	Idemitsu Oil & Gas (35.0%) INPEX (30.0%)
Operator	Japan Vietnam Petroleum Company		Idemitsu Oil & Gas
Sales Volume (Jan.-Sep. 2014)	7,600 boed (oil 6,100b/d, gas 8.8mmcf/d)		-

Principal Individual E&P Project Overview (Vietnam ②)

Block 15-2 (Rang Dong, Phuong Dong Oil Fields)

Production

Development

Exploration

Since the acquisition in 1992, the project has been one of our key operations. JVPC, our subsidiary, act as operator in the block.

The Rang Dong Oil Field and The Phuong Dong Oil Field feature an unconventional fractured granite basement rock reservoir that is unique in the world. Our fracture evaluation technology is highly valued and receiving worldwide recognition.

As part of our corporate activities, we have been promoting social welfare activities in Vietnam to improve the lives of the people of Vietnam, furthermore, we have been implementing a CDM project aimed at reducing greenhouse gas emissions.

- In 1992, JVPC acquired a working interest in block 15-2
- In 1994, JVPC discovered the [Rang Dong Oil Field](#) within block 15-2, and it began production in that field from 1998.
- In February 2008 and April 2011, Rang Dong CDM Project received CER (Certified Emission Reductions) issuance approval under the Kyoto Protocol.
- In July 2008, Rang Dong Oil Field achieved a cumulative production volume of 150 million barrels.
- In August 2008, JVPC began production in the [Phuong Dong Oil Field](#).
- In November 2013, determined on term extension of the Rang Dong Oil Field (5 years).

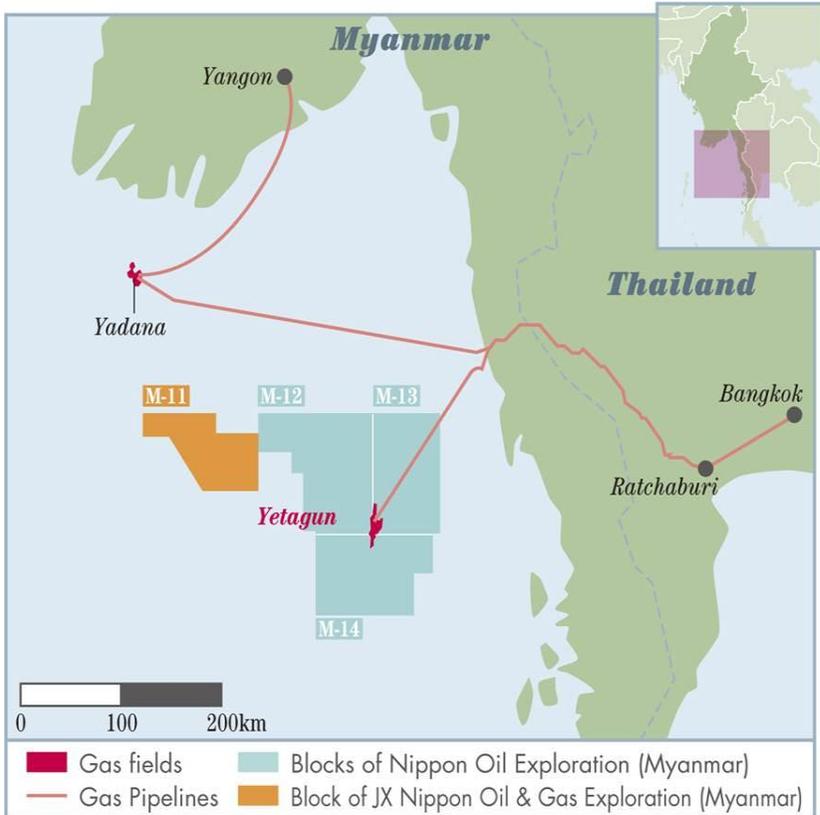
Block 05-1b/c

Exploration

- In October 2004, acquired a working interest in [block 05-1b/c](#) offshore Vietnam.
- In February 2007, excavated test well No.1.
- In August 2010, excavated test well No.2, and discovered gas and oil.
- In August 2012, excavated appraisal well No.1.
- In June 2013, confirmed gas and condensate.
- In August 2014, discovered gas and condensate.

Principal Individual E&P Project Overview (Myanmar ①)

Myanmar Production Development Exploration



	Bolock M-12, 13, 14	Block M-11
Company Holding the Acreages	Nippon Oil Exploration (Myanmar)	JX Nippon Oil & Gas Exploration (Myanmar)
Shareholders(Holding Percentages)	JX Nippon Oil & Gas Exploration (40.0%) Mitsubishi Corporation (10.0%) Government of Japan (50.0%)	JX Nippon Oil & Gas Exploration (100.0%)
Project Status	Exploration / Development / Production	Exploration
Interest	19.3%	15.0%
Partners	Petronas Carigali (40.9%) MOGE(20.5%) PTTEP International (19.3%)	PTTEP International (45.0%) TOTAL (40.0%)
Operator	Petronas Carigali	PTTEP International
Sales Volume (Jan.-Sep. 2014)	8,000boed (oil 600b/d, gas 44.2mmcf/d)	-

Principal Individual E&P Project Overview (Myanmar ②)

Block M-12,13,14

Production

Development

Exploration

We have been participating in the Yatagun project in Myanmar since exploration stage. After the appraisal activities and the construction of the production and shipping facilities, the project is now at a stable production stage.

- In 1991, NOEX Myanmar acquired a working interest in [blocks M-13/14](#) offshore Myanmar.
- The following year, acquired a working interest in [block M-12](#) and discovered the Yetagun Gas Field in that block.
- In 2000, production at the Yetagun Gas Field commenced, with the produced gas supplied to the Ratchaburi power plants in Thailand.
- In 2012, Made the Final Investment Decision on the Yetagun North Gas Field.
Development of the gas field are underway to commence of production in October 2014.
- In December 2013, sold 10% of Nippon Oil Exploration (Myanmar)'s stock to Mitsubishi Corporation.
- In September 2014, excavated test well No.1.
- In October 2014, began production in the Yetagun Gas Field.

Block M-11

Exploration

- In September 2012, acquired a working interest in [blocks M-11](#), offshore Myanmar.
(Waiting for the approval of the Myanmar government)
- In January 2013, acquired the approval of the Myanmar government.
- In November 2013, excavated test well No1.



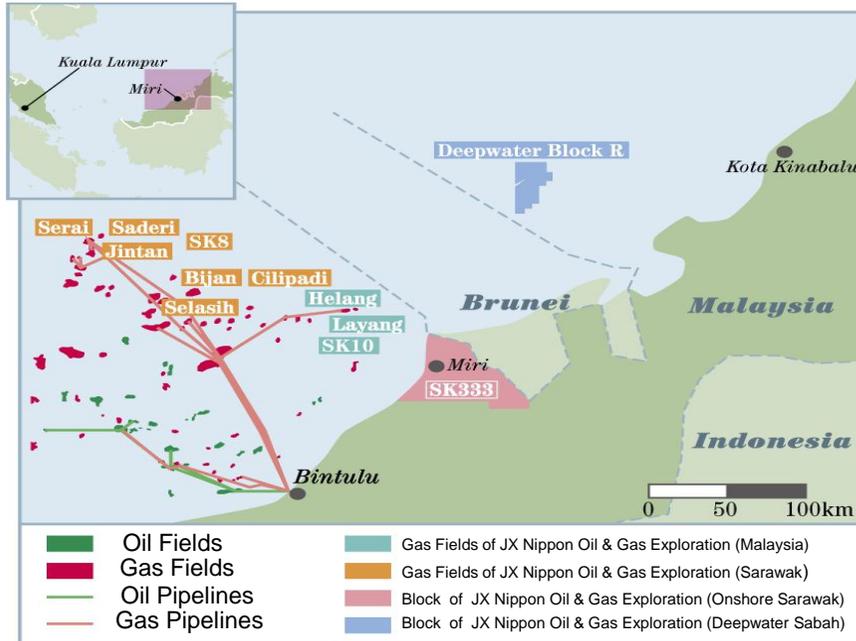
Principal Individual E&P Project Overview (Malaysia ①)

Malaysia

Production

Development

Exploration



	SK10 (Herang Gas Field, Others)	SK8 (Jintan, Cilipadi Gas Field, Others)
Company holding the Acreage	JX Nippon Oil & Gas Exploration (Malaysia)	JX Nippon Oil & Gas Exploration (Sarawak)
Shareholders (Holding Percentages)	JX Nippon Oil & Gas Exploration (78.7%) Inpex (15.0%) Mitsubishi Corporation (6.3%)	JX Nippon Oil & Gas Exploration (76.5%) Inpex (15.0%) Mitsubishi Corporation (8.5%)
Project Status	Exploration/Development/Production	Development/Production
Interest	75.0%	37.5%
Partnaers	Petronas Carigali (25.0%)	Shell Oil and Gas Malaysia (37.5%) Petronas Carigali (25.0%)
Operator	JX Nippon Oil & Gas Exploration (Malaysia)	Shell Oil and Gas Malaysia
Sales Volume (Jan.-Jun. 2014)	18,800boed (Oil 3,200b/d, Gas 93.6mmcf/d)	14,300boed (Oil 1,500b/d, Gas 76.6mmcf/d)

Principal Individual E&P Project Overview (Malaysia ②)

Block SK10 (Helang Gas Field and others)

Since the acquisition of Block SK10 in 1987, the project has been one of our key operations. We act as the operator in the block. The natural gas from the block is exported in the form of liquefied natural gas (LNG) to various countries including Japan.

Production

Development

Exploration

Mining Area during the production SK10 (Helang Gas Field)

- In 1987, acquired a working interest in Block SK10 offshore Sarawak, Malaysia.
- In 1990, discovered the Helang Gas Field, where production commenced in 2003.
- In 1991, discovered the Layang Oil and Gas Field.
- In 2014, decided to develop the Layang Oil and Gas Field.

Block SK8 (Jintan, Cilipadi Gas Fields and others)

Production

Development

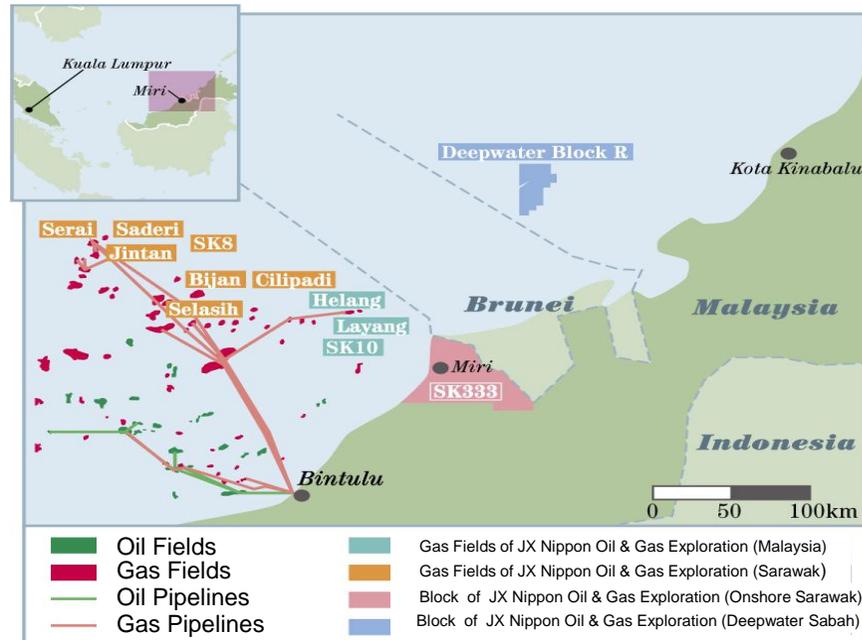
Mining Area during the production SK8 (Jintan, Saderi, Cilipadi Gas Fields)

- In 1991, acquired a working interest in Block SK8 .
- From 1992 through 1994, the Jintan and other 6 gas fields were discovered in that block, and production of Jintan and Serai were commenced in 2004.
- In 2008, the Saderi Gas Field commenced production.
- In 2011, the Cilipadi Gas Field commenced production.

Principal Individual E&P Project Overview (Malaysia ③)

Malaysia

Exploration



	PM308A	SK333
Company holding the Acreage	JX Nippon Oil & Gas Exploration (Peninsular Malaysia)	JX Nippon Oil & Gas Exploration (Onshore Sarawak)
Shareholders (Holding Percentages)	JX Nippon Oil & Gas Exploration (32.3%) JOGMEC (67.7%)	JX Nippon Oil & Gas Exploration (29.7%) JOGMEC (70.3%)
Project Status	Exploration	Exploration
Interest	40.0%	75.0%
Partners	Lundin Malaysia(35.0%) Petronas Carigali(25.0%)	Petronas Carigali (25.0%)
Operator	Lundin Malaysia	JX Nippon Oil & Gas Exploration (Onshore Sarawak)

	Deepwater Block R	Deepwater Block 2F	Deepwater Block 3F
Company holding the Acreage	JX Nippon Oil & Gas Exploration (Deepwater Sabah)	JX Nippon Oil & Gas Exploration (Offshore Malaysia)	JX Nippon Oil & Gas Exploration (Offshore Malaysia)
Shareholders (Holding Percentages)	JX Nippon Oil & Gas Exploration (100%)	JX Nippon Oil & Gas Exploration (100%)	JX Nippon Oil & Gas Exploration (100%)
Project Status	Exploration	Exploration	Exploration
Interest	27.5%	40.0%	40.0%
Partners	Inpex Offshore South Sabah(27.5%) Petronas Carigali(25.0%) Santos Sabah BlockR(20.0%)	Petronas Carigali (40.0%) GDF Suez E&P Malaysia (20.0%)	Petronas Carigali (40.0%) GDF Suez E&P Malaysia (20.0%)
Operator	JX Nippon Oil & Gas Exploration (Deepwater Sabah)	JX Nippon Oil & Gas Exploration (Offshore Malaysia)	Petronas Carigali

Principal Individual E&P Project Overview (Malaysia ④)

Block SK333

Exploration

- In December 2007, acquired a working interest in [Block SK333](#) onshore Sarawak, Malaysia.
- In January 2013, discovered gas and oil in Adong Kecil West Prospect.

Block PM308A

Exploration

- In April 2008, acquired a working interest in [Block PM308A](#) offshore peninsular Malaysia.

Deepwater Block R

Exploration

- In January 2012, acquired a working interest in [Deepwater Block R](#) deep sea, offshore Sabah, Malaysia.

Deepwater Block 2F

Exploration

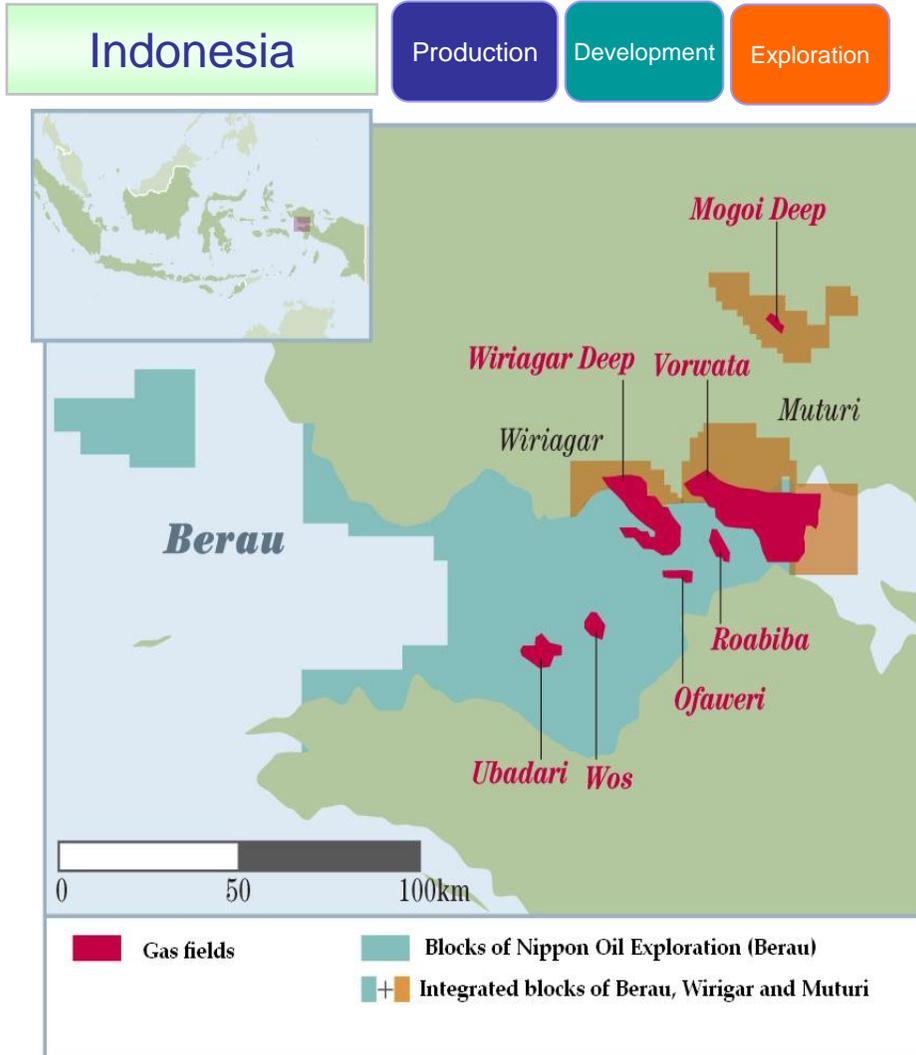
- In September 2013, acquired a working interest in [Deepwater Block 2F](#) deep sea, offshore Sarawak, Malaysia.

Deepwater Block 3F

Exploration

- In December 2013, acquired a working interest in [Deepwater Block 3F](#) deep sea, offshore Sarawak, Malaysia.

Principal Individual E&P Project Overview (Indonesia)



	Tangguh LNG Project	
Company Holding the Acreages	Nippon Oil Exploration (Berau)	
Shareholders (Holding Percentages)	JX Nippon Oil & Gas Exploration (51.0%) JOGMEC (49.0%)	
Project Status	Exploration/Development/Production	
Interest	12.2%(After Unitization)	
Partners	BP(37.2%) MI Berau(16.3%) CNOOC(13.9%)	KG Berau / KG Wiriagar (10.0%) LNG Japan (7.3%) Talisman (3.1%)
Operator	BP	
Sales Volumes (Jan.~Sep. 2014)	19,600boed (oil 500b/d, gas 114.2mmcf/d)	

This is the second LNG project we have participated in, following the LNG Tiga project in Malaysia, and we are working to attain long-term and stable LNG production and revenue.

Production Project during the production :
Tangguh LNG Project

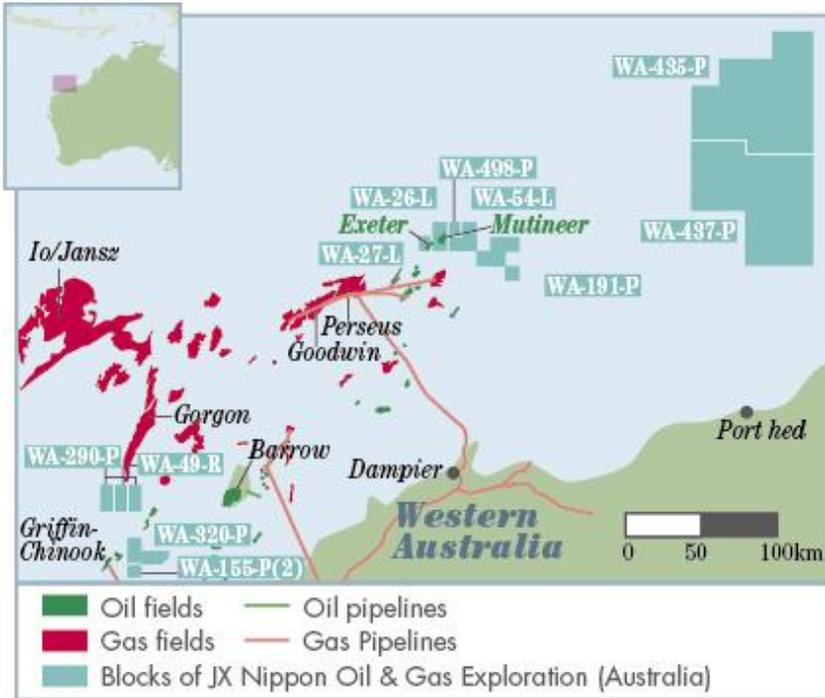
- From 1990, excavated three test wells, natural gas was discovered in the area. Subsequently, discovered natural gas in the Vorwata Gas Field, Wiriagar Deep structure, and other gas field.
- From December 2002, those with interests in the Berau, Wiriagar, and Muturi blocks agreed to become partners in unitizing the blocks and undertake development work cooperatively.
- LNG production commenced in June 2009, and the first cargo was shipped in July 2009.

Principal Individual E&P Project Overview (Australia①)

Australia

Production

Exploration



	Mutineer/Exeter Oil Field	Finucane South Oil Field Block WA-191-P
Company Holding the Acreages	JX Nippon Oil & Gas Exploration (Australia) Pty Ltd	
Shareholders(Holding Percentages)	JX Nippon Oil & Gas Exploration(100%)	
Project Status	Production	Exploration/Production
Interest	25.0%	25.0%
Partners	Santos (37.5%) Kufpec (37.5%)	Santos (37.4977%) Kufpec (37.5023%)
Operator	Santos	Santos
Sales Volumes (Jan. ~ Sep. 2014)	1,600 boed(Oil 1,600b/d)	

We are producing high-quality low-sulfur crude oil from Mutineer / Exeter oil fields. Revenue from the sales of the crude oil is used for new exploration activities within Australia and in May 2014, newly started production from Finucane South Oil Field.

Production

Exploration

- In May 1997, acquired a working interest in Block WA-191-P (present Block WA-26/27-L)
- From 1997 to 2002, discovered Mutineer and Exeter Oil Fields
- In March 2005, oil production commenced in Mutineer and Exeter Oil Fields
- In May 2011, discovered oil in Finucane sSouth structure.
- In May 2013, oil production commenced in Finucane South Oil Fields.

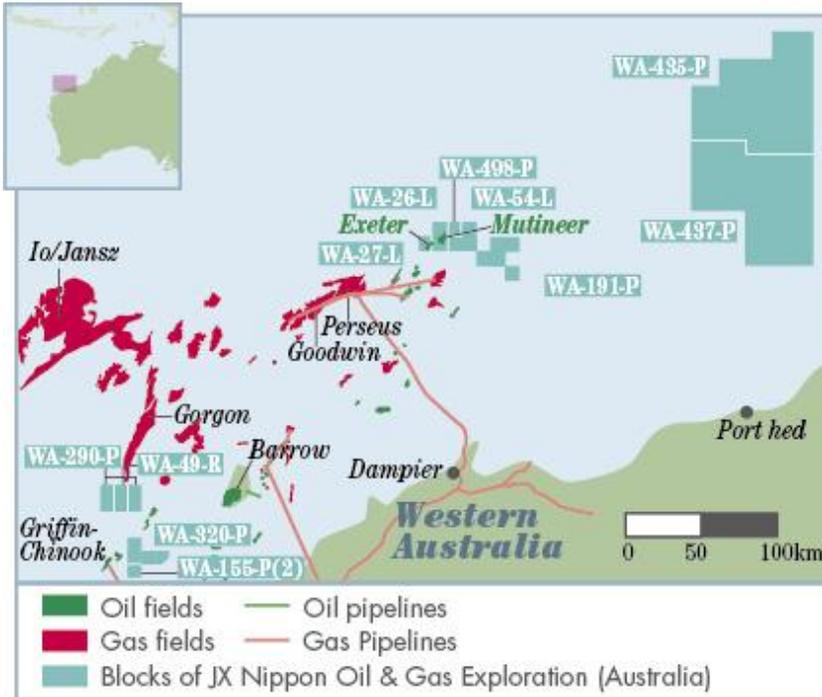


Principal Individual E&P Project Overview (Australia②)

Australia

Production

Exploration



	WA-290-P WA-49-R	WA-435-P WA-437-P	WA-320-P
Company Holding the Acreages	JX Nippon Oil & Gas Exploration (Australia) Pty Ltd		
Shareholders(Holding Percentages)	JX Nippon Oil & Gas Exploration (100%)		
Project Status	Exploration	Exploration	Exploration
Interest	15.0%	20.0%	10.0%
Partners	Apache (30.25%) Santos (24.75%) OMV(20.00%) Tap(10.00%)	Apache (40.0%) Finder (20.0%) Carnarvon (20.0%)	Apache (40.665%) OMV (39.557%) Tap (9.778%)
Operator	Apache	Apache	Apache

	WA-155-P(2)	WA-498-P
Company Holding the Acreages	JX Nippon Oil & Gas Exploration (Australia) Pty Ltd	
Shareholders(Holding Percentages)	JX Nippon Oil & Gas Exploration(100%)	
Project Status	Exploration	Exploration
Interest	7.0%	25.0%
Partners	Apache (40.665%) OMV(27.11%) Inpex (18.67%) Tap(6.555%)	Santos (75.0%)
Operator	Apache	Santos



Principal Individual E&P Project Overview (Australia③)

Block WA-290-P,Block WA-49-R

Exploration

- In April 2011, excavated test well "Zola-1", and discovered Gas
- In July 2013, excavated appraisable well "Bianchi-1", and discovered Gas

Block WA-320-P,Block WA-155-P(2)

Exploration

- In June 2013, acquired working interests in Block WA-320-P and Block WA-155-P

Block WA-435-P,Block WA-437-P

Exploration

- In October 2012, acquired working interests in Block WA-435-P and Block WA-437-P
- In August 2014, discovered oil in Block WA-435-P

WA-498-P

Exploration

- In April 2014, acquired working interests in WA-498-P.



Principal Individual E&P Project Overview (Papua New Guinea ②)

Kutubu, Moran, Gobe oil fields and others

Production

- In 1990, Japan Papua New Guinea Petroleum acquired Merlin and acquired original exploration rights of Merlin in Papua New Guinea. Subsequently, development, and production activities have been undertaken in the [Kutubu, Moran, Gobe, SE Gobe, and SE Mananda oil fields](#).
- In 2008, acquired additional equity of oil field from AGL Energy.

Exploration

- In April 2011, excavated test well "Mananda-5" in [Block PPL219](#), and discovered oil.

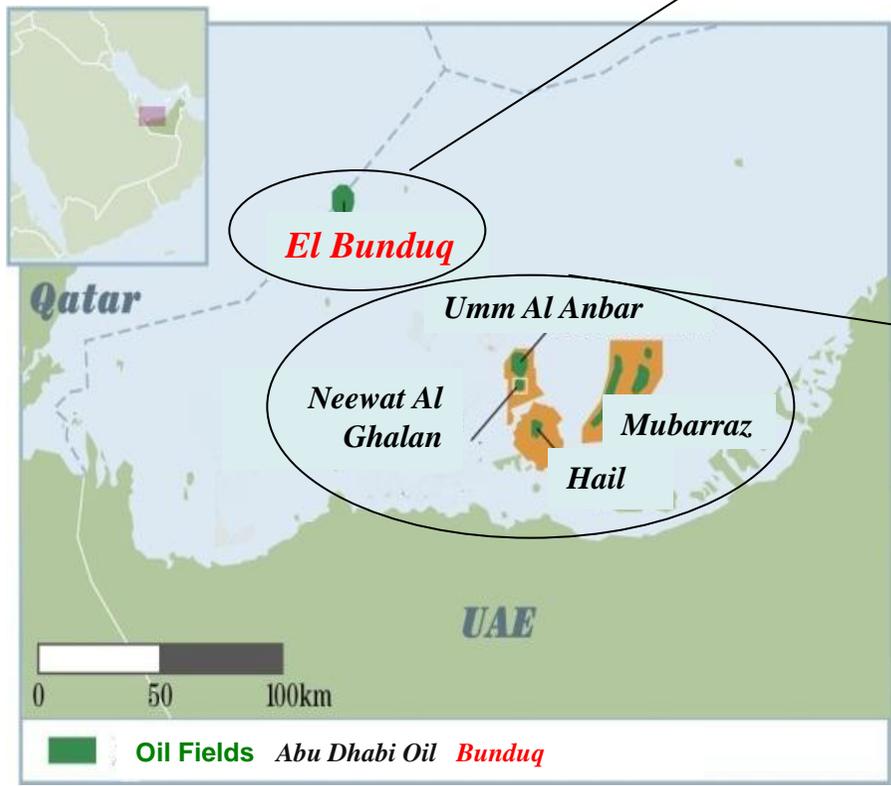
PNG LNG Project

Development

Project during the development PNG LNG Project

- We have been involved in PNG LNG Project since the beginning of the project. In December 2009, we made a Final Investment Decision on the Project, and the development work is in progress with the goal of starting shipments in 2014. PNG LNG Project has the full support of the PNG government, and we expect it to contribute to our revenues in the future.
- In December 2008, acquired the PNG LNG Project equity that AGL Energy owned.
 - In December 2009, PNG LNG Project was made a final investment decision to proceed with the development.
 - In May 2014, PNG LNG Project ships first LNG cargo.

Principal Individual E&P Project Overview (UAE, Qatar ①)



Company Holding the Acreages	United Petroleum Development (Bunduq Company Limited)
Partners	JX Nippon Oil & Gas Exploration (45.0%) Cosmo Energy Exploration & Production Co., Ltd. (45.0%) Mitsui Oil Exploration Co., Ltd (10.0%)
Project Status	Exploration / Development / Production
Interest	97.0%
Partners	BP (3%)
Operator	Bunduq Company Limited

- In 1970, United petroleum Development acquired a working interest of El Bunduque Oil Field.
- In 1975, oil production commenced in [El Bunduq oil field](#).
- In 1983, oil production was resumed by a secondary recovery scheme using water injection.
- In 2006, El Bunduque achieved a cumulative production volume of 200 million barrels.

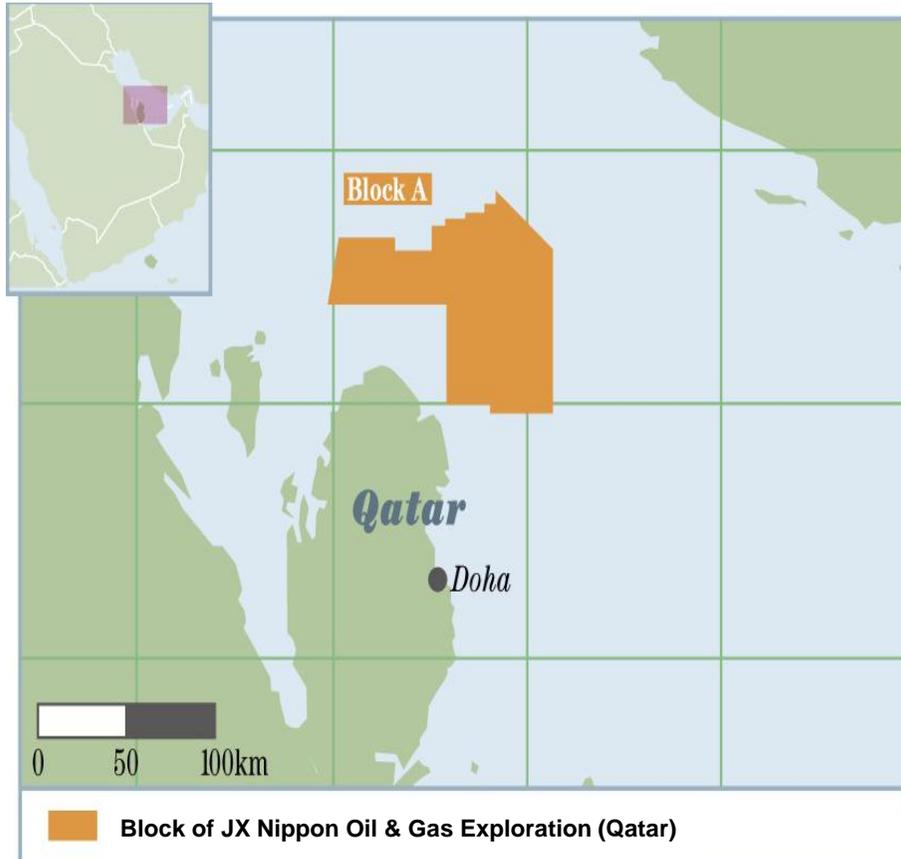
Company Holding the Acreages	Abu Dhabi Oil
Partners	JX Nippon Oil & Gas Exploration (32.1%) Cosmo Energy Exploration & Production Co., Ltd.(64.2%) Chubu Electric Power Co., Inc.(1.9%) Kansai Electric Power Co., Inc.(1.9%)
Project Status	Exploration / Development / Production
Interest	100.0%
Operator	Abu Dhabi Oil

- In 1967, acquired a working interest in block of Mubarraz.
- In 1973, oil production commenced in [Mubarraz Oil Field](#).
- In 1989, oil production commenced in [Umm Al Anbar Oil Field](#).
- In 1995, oil production commenced in [Neewat Al Ghalan Oil Field](#).
- In 2009, 3 fields achieved cumulative production volume of 300 million barrels.
- In 2011, Sign a New Concession Agreement.
- In 2012, Effectuation of New Concession Agreement.

Principal Individual E&P Project Overview (UAE, Qatar ②)

Qatar

Exploration



Project Company

JX Nippon Oil & Gas Exploration (Qatar) Limited (51%)
(%) = JX Group Shareholding

Interest in Individual Fields

100%

Operator

JX Nippon Oil & Gas Exploration (Qatar) Limited

Exploration

- In May 2011, acquired a working interest in [Block A](#) (Pre-Khuff), offshore Qatar .
- In March 2012, established interest in Block A (Pre-Khuff), offshore Qatar officially came into effect.
- In August 2014, began excavating test well No1.



JX Group's Reserve Standards

JX Group's criteria for evaluating reserves conforms to the PRMS (Petroleum Resources management System) Standards, drafted by the SPE (Society of Petroleum Engineers), WPC (World Petroleum Congress), AAPG (American Association of Petroleum Geologists), and SPEE (Society of Petroleum Evaluation Engineers).

JX Group's reported reserves are in line with reserves as defined by the PRMS Standards. The degree of certainty of the reserve values is categorized, in order, as either Proved, Probable, or Possible. Following trends common at other industry firms, JX Group's has used Proven and Probable reserves to arrive at its total reserves.

Definition of Proved Reserves:

Reserves judged to have a high level of certainty from analysis of geoscience and production/petroleum engineering data, based on economic conditions, operational methods and laws and regulations assumed by JX Group in light of discovered reservoirs—there is at least a 90% probability that actual recovered volume will equal or exceed estimates of oil and natural gas deposits reasonably evaluated as commercially recoverable.

Definition of Probable Reserves:

There is at least a 50% probability that additional oil and natural gas reserves will equal or exceed actual recovered volume of the total of estimated proved and probable reserves. While these additional reserves are evaluated in the same manner as proved reserves, the probability of recoverability of probable reserves is lower than proved reserves, but higher than possible reserves.

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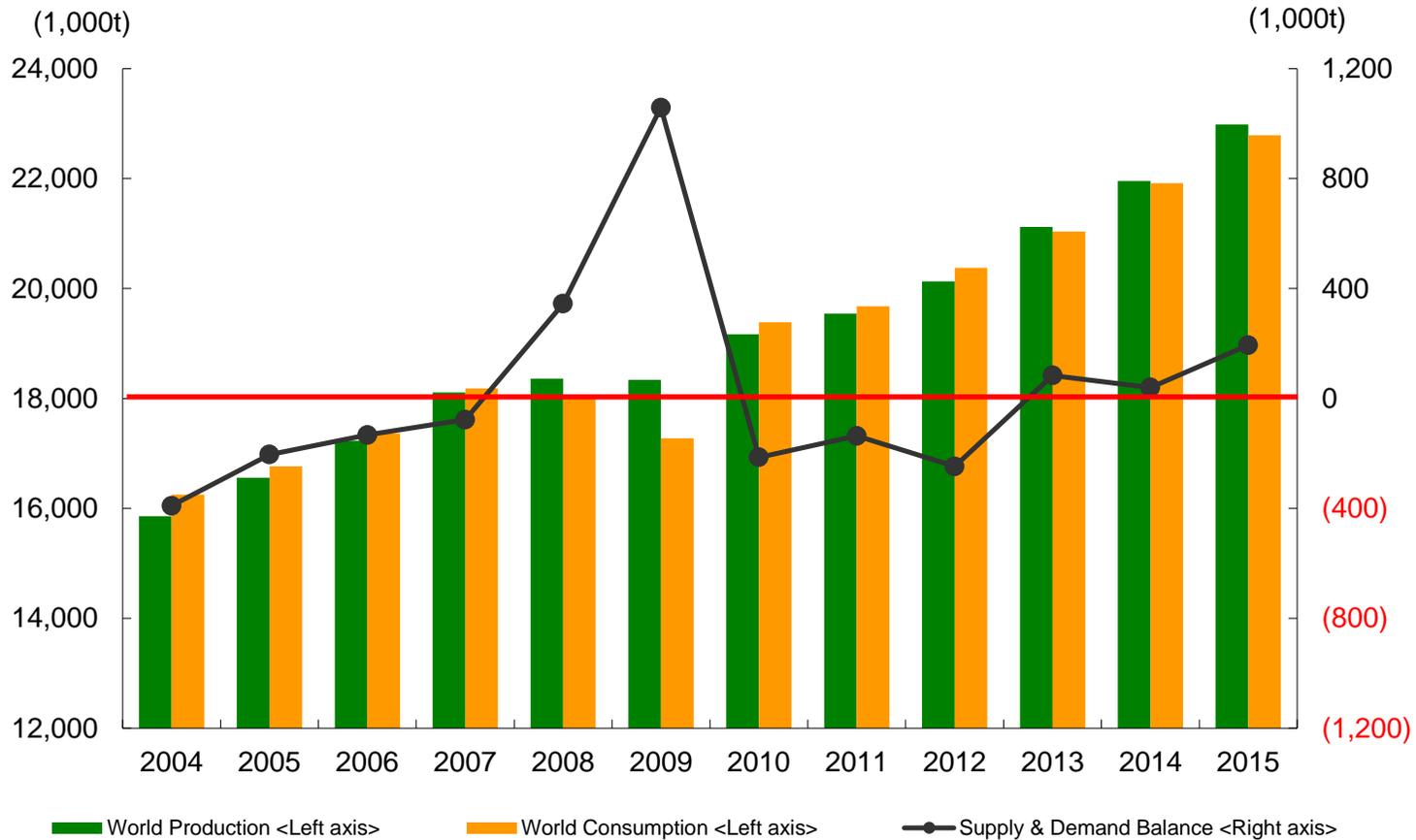
Business Environment and Data - Metals Business -

Copper Production of JX Group's Mines

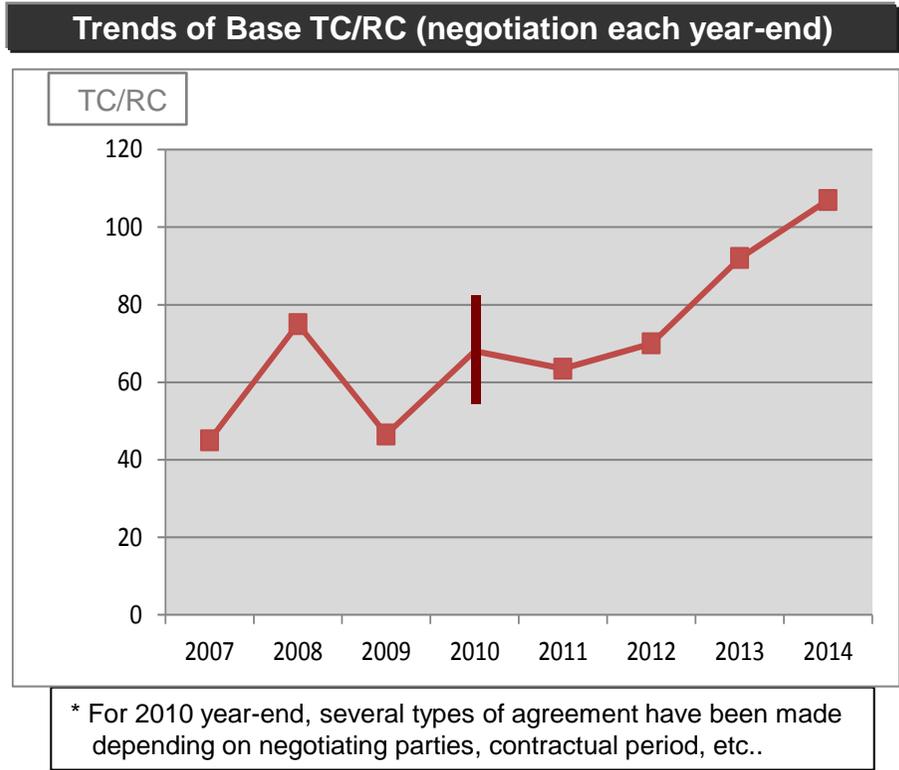
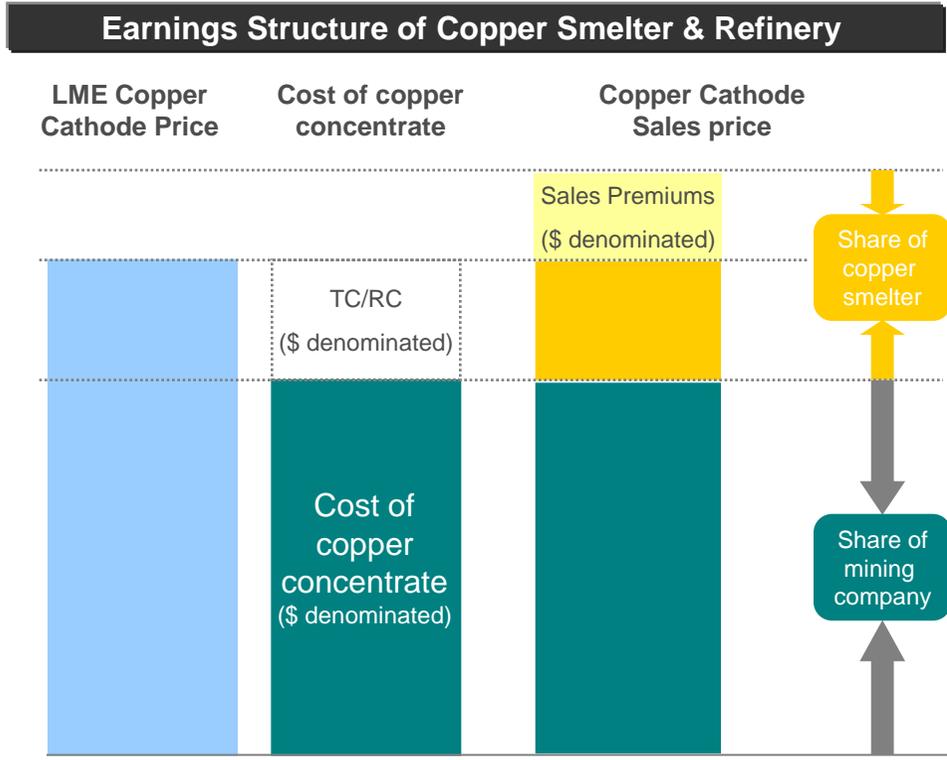
(Thousand Ton)		CY 2013	CY 2013	CY2014
		Jan. -Sep.	Jan. -Dec.	Jan. -Sep.
		Actual	Actual	Actual
Caserones	Copper concentrate *	—	—	7
	SX-EW copper cathode	—	16	18
	Total	—	16	26
Los Pelambres	Copper concentrate *	303	405	292
	Copper concentrate *	264	401	324
Collahuasi	SX-EW copper cathode	23	28	16
	Total	287	429	340
Escondida	Copper concentrate *	651	859	622
	SX-EW copper cathode	228	305	227
	Total	879	1,164	849

*Payable copper contained in concentrate

World's Copper Cathodes Supply & Demand



Earnings Structure of Copper Smelting and Refining Business



Cost of copper concentrate :

The price of copper concentrate, which custom smelters pay to mining companies, is LME copper cathode price less TC/RC, which is smelting and refining margins. TC/RC under long-term contracts is normally determined through annual negotiation between copper smelters and mining companies.

Copper cathode sales price :

Actual sales price of copper cathode produced by copper smelters is LME price plus sales premium, which is established by reference to various factors including importation costs, qualities and others.

N-Chlo Process

N-Chlo Process

The N-Chlo Process is a new hydro-metallurgical process that we have uniquely developed.

The process enables the effective recovery of not only copper from low-grade copper concentrate, but also such precious metals as gold and silver.

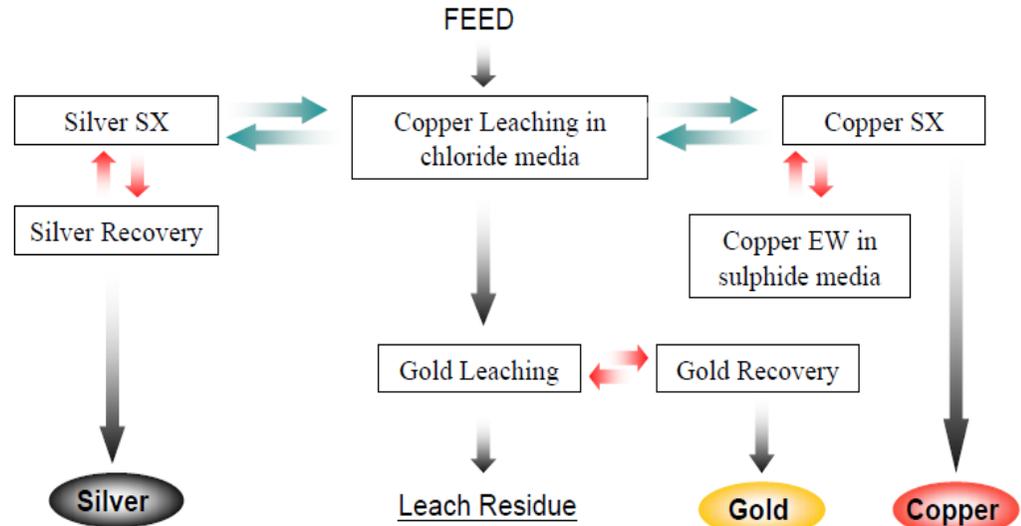
We constructed a pilot plant in Australia and had completed demonstration test FY2013, and we got a good result about copper and gold recovery.

We advance an effort to commercialize the process while searching the mines to apply the process.

Pilot plant in Perth, Australia (About 100t/year Cu recovery)



Structure of N-Chlo Process



Biomining



Biomining

Biomining is a hydro-metallurgical method of extracting copper from copper ores in acidic condition accelerating the extraction by utilizing activity of microorganisms.

Low-grade primary copper sulfide ores have not been used enough as resources without economical recovery process. Biomining technology is mainly applicable to such ores and has great potential in future.

BioSigma S.A. was established in 2002 and started collaborative study of Biomining technology between JX Mining & Metals(33%) and CODELCO (67%).

Taking favorable results of the industrial test conducted at CODELCO's Radmido Tomic mine with low-grade primary copper sulfide ores, launch of commercial application of the technology to the mine was announced in August, 2014.

Method of Biomining

【Type of Ore】	【Economical Process of Copper Recovery】	
Oxide Ore	Hydro-metallurgical Process (SX-EW) Leaching by sulfuric acid ~ Solvent extraction ~ Electrowinning	Pyro-metallurgical Process (Smelter & Refinery) Smelting ~ Electrorefining
Secondary Sulfide Ore		
Primary Sulfide Ore	Hydro-metallurgical Process (SX-EW) + Biomining technology Leaching by sulfuric acid (added microorganisms) ~ Solvent extraction ~ Electrowinning	
(Low-grade)		

