



Note: The following press release is an English translation of the Japanese-language original

May 12, 2015

Company Name: Japan Petroleum Exploration Co., Ltd. (JAPEX)
President: Osamu Watanabe
Inquiries: Media and Investor Relations Department
TEL.: +81-3-6268-7110

Long Term Business Vision and Medium-Term Business Plan of the JAPEX Group

Japan Petroleum Exploration Co., Ltd. (hereafter “JAPEX”) has formulated Long Term Business Vision, with the key message of “Transformation to Integrated Energy Company, around Oil and Gas E&P Business”. Together, JAPEX has formulated Medium-Term Business Plan from 2015 to 2019.

On May 2011, JAPEX has announced Medium-Term Business Plan (Fiscal Year 2011 to Fiscal Year 2015, hereafter “Previous Plan”), with the basic policies of E&P (Exploration, Development and Production of Crude Oil and Natural Gas) business, domestic Gas Business, and Environmental and Innovative Technology Businesses.

In the Previous Plan, we have set 3 stages of quantitative targets (1st stage: Shifting Investment to overseas, 2nd stage: Expanding consolidated daily production to 70,000 barrels of crude oil equivalent by Fiscal 2016, 3rd Stage: Expanding the consolidated reserves to 450 million barrels of crude oil equivalent by Fiscal 2021). By our efforts so far, these targets are likely to be achieved. For this reason, we have decided to formulate Long Term Business Vision aiming 10 years, and Medium-Term Business Plan for 5 years in order to achieve this Long Term Business Vision.

Although the international oil prices have fallen rapidly from second half of last year, and outlook for recovery is still unclear, we have perception that crude oil and natural gas will further be a vital source as a primary energy in the world. In this Long Term Business Vision and Medium-Term Business Plan, we have set our plan for future in order to further promote policies set in the Previous Plan. The summaries are as follows:

“Transformation to Integrated Energy Company, around Oil and Gas E&P Business”

As a result of shifting business into overseas such as proceeding Canada Oil Sand Hangingstone Expansion Project and acquiring stake of Pacific Northwest LNG, volume of production and reserves targeted May 2020 are estimated to be 100,000 BOED of Production / 550 MMBOE of Reserves.

We have faced rapid decline of the oil price recently, and re-recognized the volatility of

the oil price. We also recognize that we need to diversify our business in order to mitigate the effect of oil prices and stabilize business.

For this reason, we will expand our business into areas related to oil and gas business, including electricity generation, and areas that have close relations with E&P technologies. JAPEX will aim for earning profits from new businesses other than traditional E&P business.

Areas		Target / Policies
Business Policies	E&P Business	<ul style="list-style-type: none"> • Pursue currently ongoing projects and making profits at the production stage. • Seek for domestic potentials and build efficient operational frameworks • Keep RRR (Reserves Replacement Ratio) > 1 even after ongoing projects have settled by 2020.
	Domestic Natural Gas Supply Business	<ul style="list-style-type: none"> • Diversify supply sources and supply methods, and expand scales. • Commence operation of Soma LNG Terminal and commercialize power generation business. • Become supplier of natural gas handling 2.5 million ton by 2025. (1.2mm ton in 2014 and 1.5 mm ton in 2019)
	Environment and Innovative Technology Business	<ul style="list-style-type: none"> • Develop technology for Methane Hydrate • Pursue establishment of CCS technology and make legislative preparation for private companies. • Pursue geothermal power business
	CSR	<ul style="list-style-type: none"> • Pursue efforts to priority agendas “SHINE”
Profit Goals	<ul style="list-style-type: none"> • Maximize profits through best project management • Keep stable dividend even during oil prices have declined • Increase dividend at the time when oil prices have recovered and ongoing projects have started to make profits. 	

Please refer to the appendix for details.

By promoting these plans, JAPEX group will establish basement for business and further strengthen our competitiveness, and by promoting efficiency as well, JAPEX will make efforts to promote sustainable development and maximizing the shareholder value.

Appendix: The Long-Term Vision –Towards the Leap to 2025-



Long-Term Business Vision

~Towards the Leap to 2025~

**“Transformation to Integrated Energy Company
Around Oil and Gas E&P business”**

12 May, 2015

Japan Petroleum Exploration Co., Ltd.

Contents

Introduction

I . Progress of the previous Medium-Term Business Plan

II . Perception of the business environment

III . Long-Term Business Vision ~ Image of the Leap on 2025

IV . Short and Medium-Term target and policies

V . Outlook of revenue and profits

VI . CSR (Corporate Social Responsibility)

VII . Summary

VIII . <Appendix>Current status of business / Acronyms

Introduction

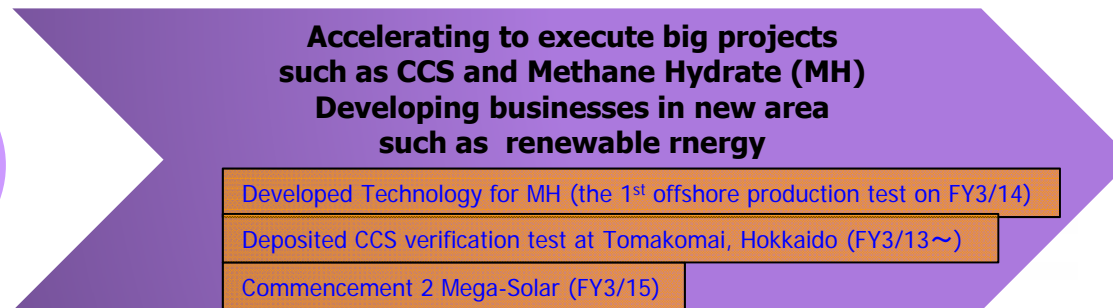
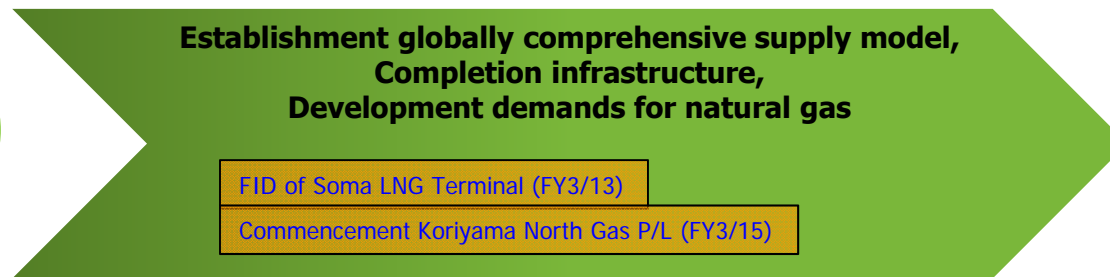
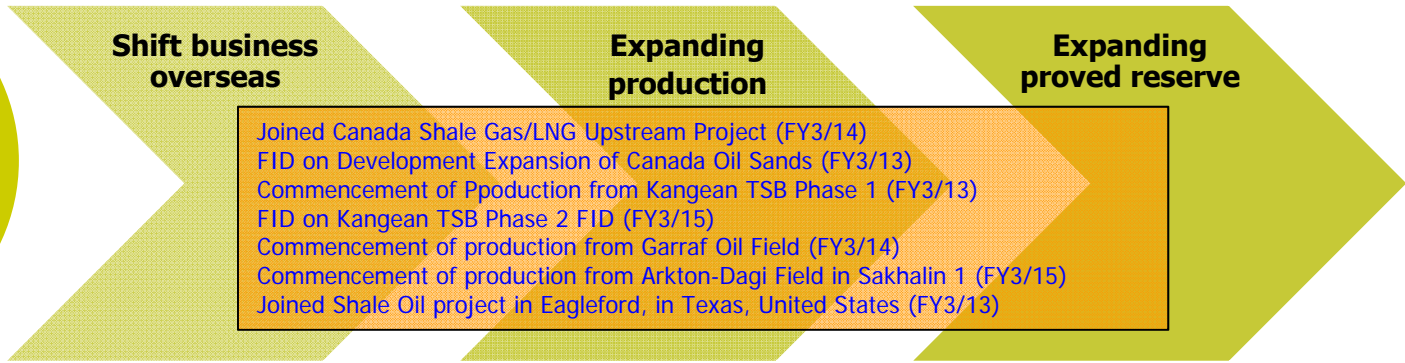
- JAPEX announced Medium-Term Business Plan from FY3/12 to FY3/16 (hereafter “the previous plan”) setting 3 quantitative targets of E&P (Exploration and Production) business, domestic gas business, and environment and innovative technology on May, 2011.
- By our execution after announced the previous plan, we are likely to achieve the targets settled as follows; ① shifting businesses overseas, ② expanding consolidated daily production to 70,000 bbl of crude oil equivalent by FY3/15, and ③ expanding consolidated proved reserve to 450 million bbl of crude oil equivalent by FY3/21.
- For this reason, we decided to formulate Long-Term Vision aiming 10 years and Medium-Term Business Plan for next 5 years from FY3/16 to FY3/20 in order to achieve this Long-Term Vision.
- By promoting these plan, JAPEX group will establish basement for business further strengthen our competitiveness, and by promoting efficiency as well, JAPEX will make efforts to promote sustainable development and maximizing the stakeholder value.

I . Progress of the previous plan (1)

~ 3 quantitative targets of our business

Major achievement of the previous plan

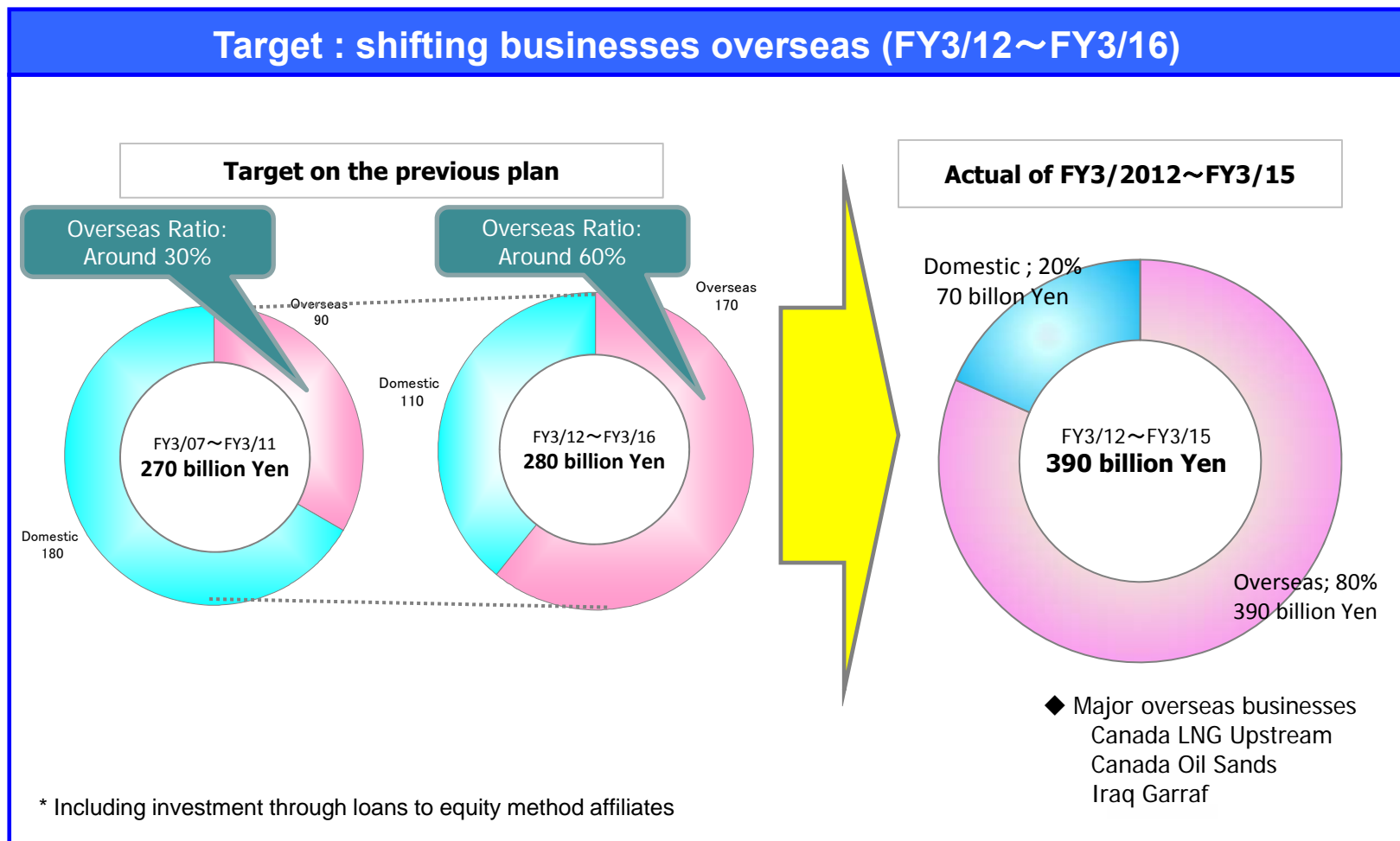
* E&P: Exploration and Production



I . Progress of the previous plan (2)

~ Shifting businesses overseas

- Executed drastic commitment to shifting businesses overseas



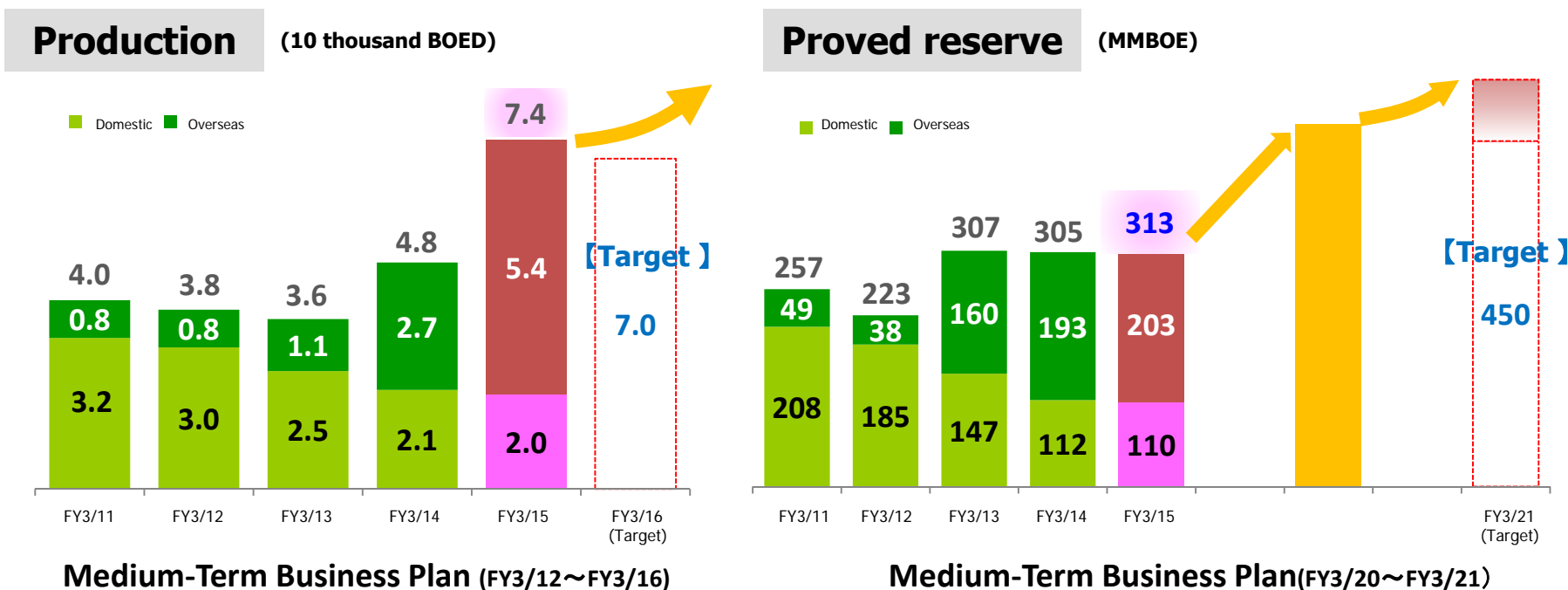
I . Progress of the previous plan (3)

~ Target of production and proved reserve

■ The Latest actual on FY3/2015;

74,000 BOED of daily production / 313 MMBOE of proved reserve

- 54% increase in production and achieved the target of production on the previous plan a year ahead by contributions of full-year production on Canada Shale Gas Project and Iraq Garraf Oil Project
- 3% increase in reserve by compensation from progress of Canada Shale Gas development
- Through further development of Canada Shale Gas project and progress of Iraq Garraf Oil project, we are standing to prospect of achieving the target proved reserve (450MMBOE by FY3/21).

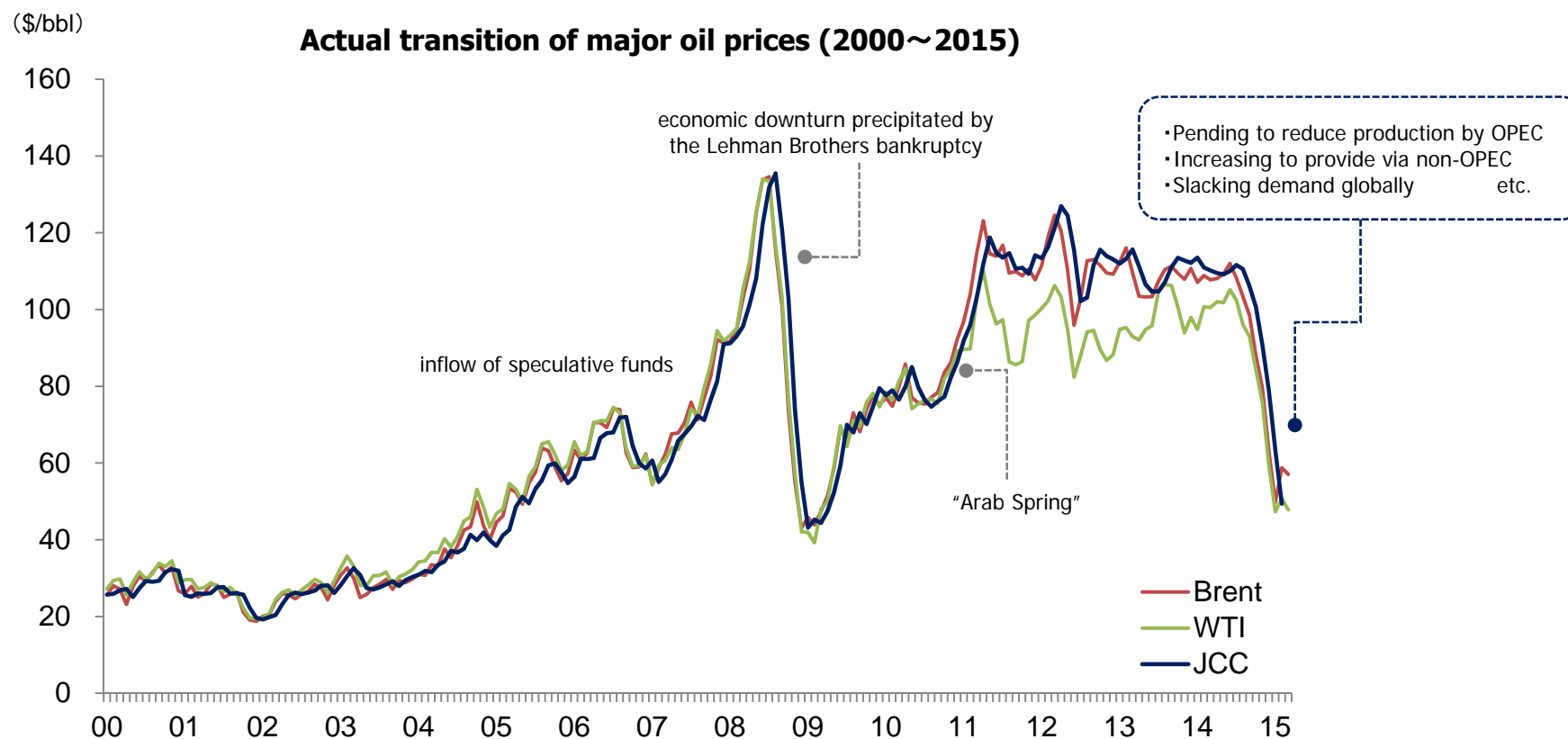


* These figures concerning production and reserve mean the amount by economic share of JAPEX group

II . Recognition of business environment (1)

~ Transition of oil price (actual)

- Oil prices has plunged from the middle of 2014. Its fluctuation range tend to be large in recent years and also unforeseeable how change in feet.
- However, in the longer terms, the major view is that demands of the emerging countries are expected and oil and natural gas will still be a primary energy globally.



* Arranged by JAPEX from Statistics by The Institute of Energy Economics, Japan

II . Recognition of business environment (2)

~ External environment

Actualized fluctuation risk of international crude oil price

- Rapid decline of oil price from 2014 summer
- Excess supply trend of crude oil against the background such as "Shale Revolution"
- Global demand declination of crude oil particularly in Europe
- Decrease the value of oil and gas assets / movement of industrial consolidation including M&A etc.

Geopolitical risk

- Destabilization of the situation in Iraq and neighboring countries by IS
- Political destabilization of Yemen and military intervention by Arab countries
- Sanctions to Russia stemming from the Ukraine problem
- Whereabouts of economic sanctions to Iran concerning their nuclear development etc.

Intensifying competition of domestic gas business

- Systematic reform of electric and gas business / entirely retail liberalization
- Movement of alliance and new entry beyond the boundary of energy sector
- Commencement of commercial operation of domestic LNG receiving terminal by competitors etc.

Measure for earth environmental problems

- Absence of energy policy after Great East Japan Earthquake on 2011 / discussion of future energy best mix
- Tendency of the target of green house gas reduction by COP21 until the end of 2015
- Immutable of the big trend of GHG reduction etc.

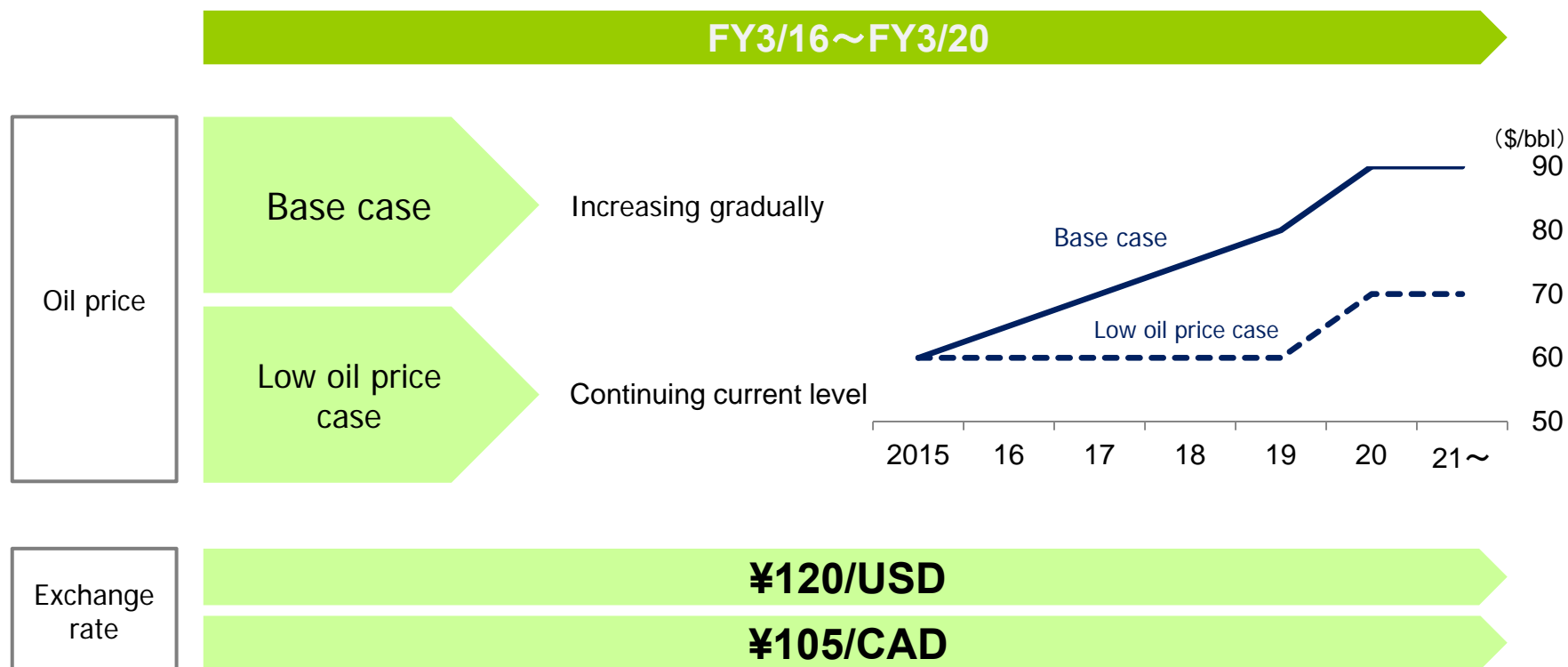
On the other hand, we have prospects as follows;

- Increasing drastically demands for oil and natural gas particularly in emergency countries in mid-long term
- Unlikely to form the international agreement of extreme suppression of using fossil fuel
- Oil and natural gas will continue to play major role of primary energy longer and internationally

II . Recognition of business environment (3)

~ Premise of oil price and exchange rate

- Assumption future oil price and foreign exchange rate as below based on current trends and feeling of rising future price
- Also supposing low oil price case to correspond oil price fluctuation in addition to base case



III. Long-Term Business Vision (1)

~ Towards the Leap to 2025

“Transformation to Integrated Energy Company around oil and gas E&P business”

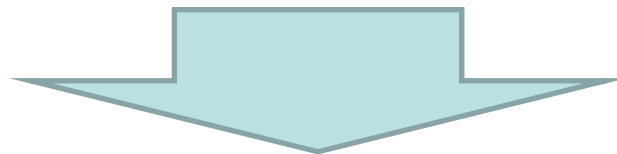
Domestic customers are the most important for our business even though decline proved reserve is fated to E&P business companies



Expansion of supply infrastructure corresponding increase of LNG demands for aiming to stable domestic supply of natural gas

+

Expansion of business basement that is difficult to be affected by impact of oil price
Fluctuations being aware of volatility of crude oil price



Expanding our business actively around E&P including power generation as well as our focused and conventional E&P business

III. Long-Term Business Vision (2)

~ E&P business

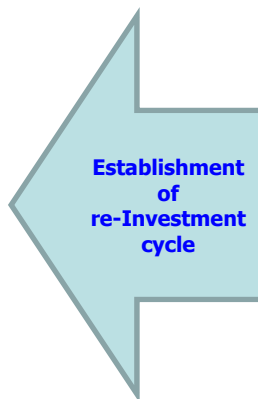
[Target]
RRR > 1
[Add to high-profitable reserve]

RRR : Reserve Replacement Ratio
 = (During certain period) [Increase amount of reserve] ÷ [Production amount]



Long-Term actions

- **Expanding Reserves of Ongoing Projects**
 - Upgrading “Holding Resource” to “Reserve” (JACOS, Canada Shale Gas, and Domestic ones)
- **Investment New Opportunities**
 - Regarding important Profitability than Scale
 - Consideration including M&A



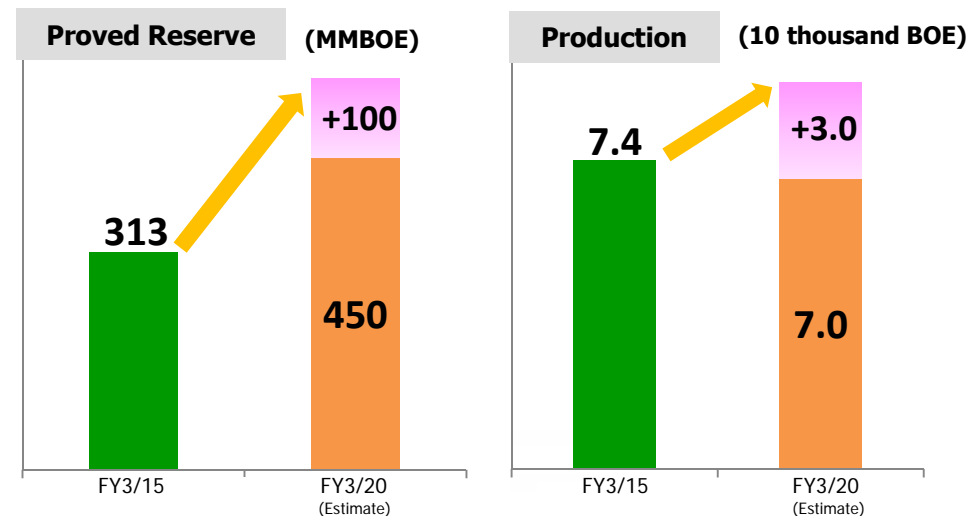
“Proved Reserve”: Amount of oil and natural gas that will be able to product commercially in development known integrated oil
 “Resource”: Amount of oil and natural gas that exist naturally (undeveloped or expected ones that will find in future)

Medium-Term actions

- | | |
|--|--|
| <p>[Overseas]</p> <p>Stable execution of ongoing big projects</p> <ul style="list-style-type: none"> ➢ Increasing production and reserve ➢ Return of investment / secure earnings <p>➢ Realignment of strategy for studying new opportunities</p> | <p>[Domestic]</p> <ul style="list-style-type: none"> ➢ Pursuing additional E&P potentials ➢ Maximization of production volume by EOR ➢ Establishment of efficient operation ➢ Contribution to research and development of Methane Hydrate ➢ Pursuing conversional marine area potentials through government's basic research |
|--|--|
- } Most important mission



Breakdown image on FY3/20
 (contributed mainly overseas projects)

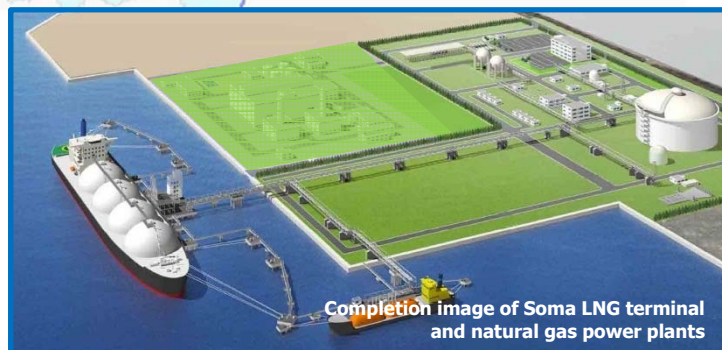
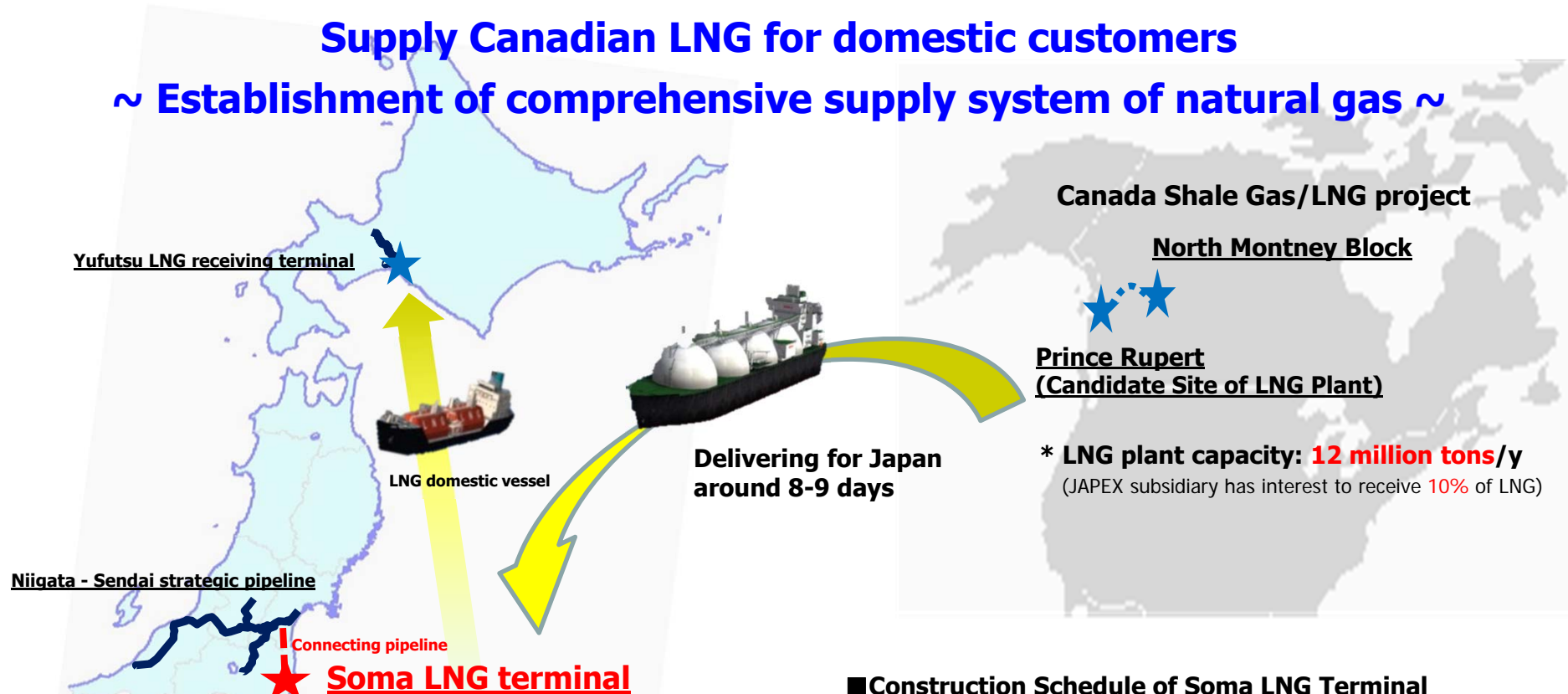


III. Long-Term Business Vision (3)

~ Domestic supply business① - Soma LNG terminal

Supply Canadian LNG for domestic customers

~ Establishment of comprehensive supply system of natural gas ~



■ Construction Schedule of Soma LNG Terminal

Nov. 27, 2013	Final Investment Decision (FID)
Nov. 2014	Commencement of construction
End of 2017	Completion of the Terminal (planned)
Mar. 2018	Commencement of operation (planned)

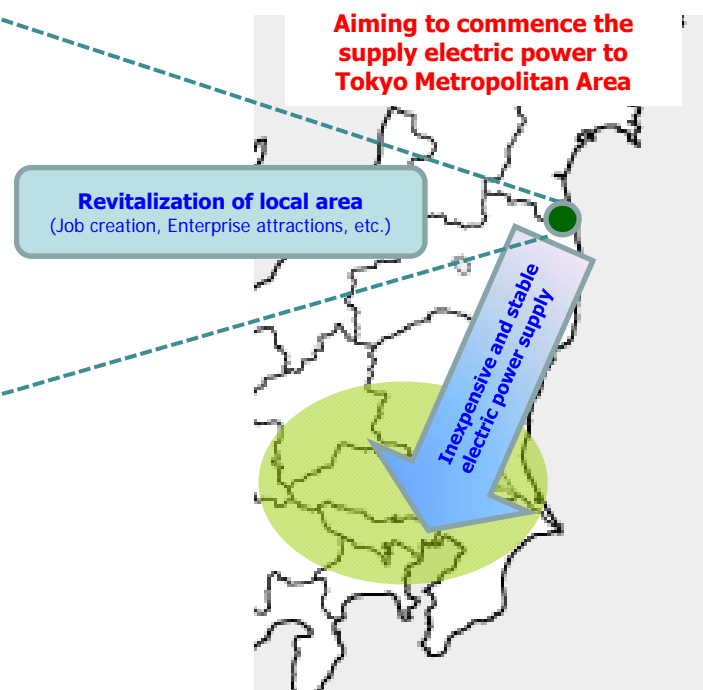
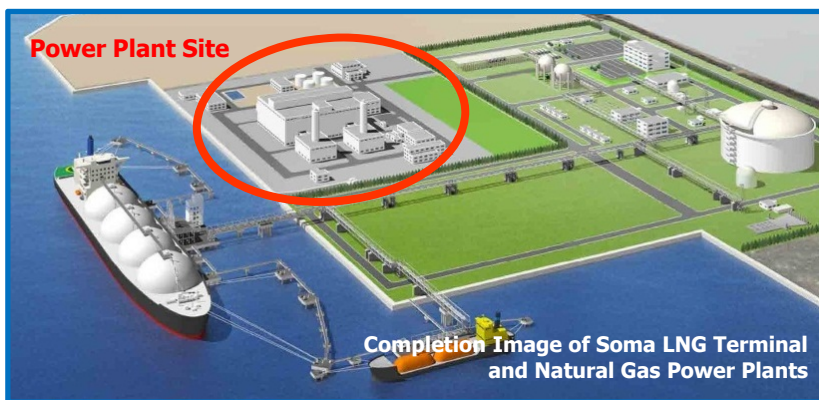
III. Long-Term Business Vision (4)

~ Domestic supply business② - Soma power generation

- Now studying the business of thermal power generation using vapor gas from Soma LNG terminal
- Installation of power generation facilities which is high-efficiency gas turbine combined cycle type at adjoining place of Soma LNG Terminal

Strategic merit

- | | |
|--|---------------------------------------|
| 1. Expanding business based on oil and gas business | ⇒ Comprehensive energy company |
| 2. Resistance to fluctuation of oil price | ⇒ Strong business portfolio |
| 3. Limited financial burden (practical use of project finance) | ⇒ Best finance mix |



■ Schedule (Planned)

Nov. 2014	Start the 1 st step for Environmental Assessment
Apr. 2015	Establishment of Fukushima Gas Power Co., Ltd. *
Mid 2017	Completion of environmental assessment Commencement of construction
Jan. 2020	Commencement of commercial operation of No.1 plant
Apr. 2020	Commencement of commercial operation of No.2 plant

* Established by JAPEX and Mitsui Corp. to study and prepare of electric power business

Ⅲ. Long-Term Business Vision (5)

~ Domestic supply business③

- Maintain stable supply by practical using and expanding our supply infrastructure even though declining amount of domestic natural gas
- Diversifying both "supply" and "procurement" and expanding scale of supply

[Target]
Become the supplier handling 2.5 million tons of natural gas per a year by 2025

Current (FY3/15)	
Business volume of natural gas (actual) : 1.2 million tons (LNG equivalent) (Domestic produced gas : LNG ≐ 50:50)	
Supply system	Pipelines, Satellite shipment from Nihonkai LNG (by LNG tanker trucks or freight containers), Owned domestic vessel supplying LNG to customers' bases etc.
Procurement source	Domestic gas, Long-term contract of Malaysia (until 2022), Spot LNG purchase

Diversifying both "supply" and "procurement"

Long-Term actions	
Supply system (additional)	<ul style="list-style-type: none"> • Soma power generation (1.2 million kW+α). Reloading ocean-going vessels at Soma LNG terminal, Using underground storage etc.
Procurement source (additional)	<ul style="list-style-type: none"> • No.1 &2 Train of PNWL (Pacific North West LNG)*, PNWL expansion, Sakhalin1 LNG, New interest project(s), LNG purchase

Expansion of diversity

Medium-Term actions (FY3/21)	
Supply system (additional)	Soma LNG terminal, Soma satellite/domestic-vessels shipment, Soma power generation (600 thousand kW)
Procurement source (additional)	Start up PNWL No.1/No.2 train * (or tentative spot LNG purchase)
Business volume of natural gas (estimate) : 1.5 million tons (LNG equivalent)	

* PNWL will start up around Mid-FY3/20~end of FY3/21

III. Long-Term Business Vision (6)

~ Environment and innovative technology①

- Pursuing adaptation technologies which has affinity with E&P business
- Accelerating renewable energy business

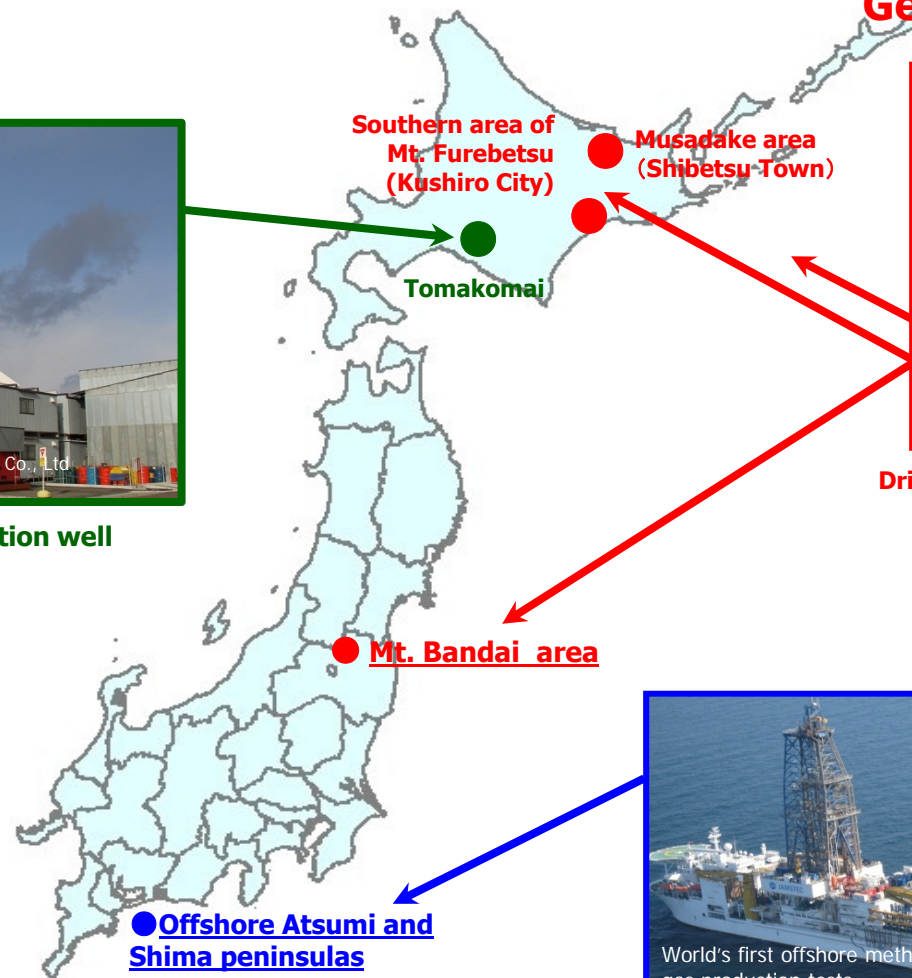
CCS



Drilling of CCS observation well

Photo provided by Japan CCS Co., Ltd.

Geothermal energy



Drilling operation of Musadake area

Methane Hydrate



World's first offshore methane hydrate gas production tests



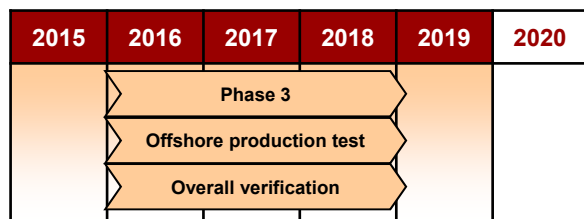
Photo provided by JOGMEC

* continuing the consensus of the local community

III. Long-Term Business Vision (7)

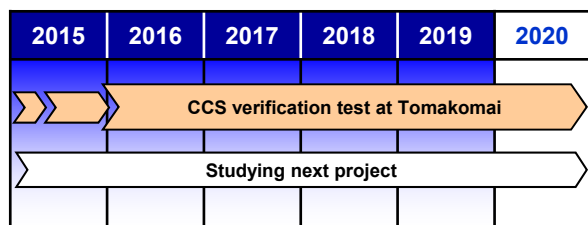
~ Environment and innovative technology② - Present actions

Methane Hydrate



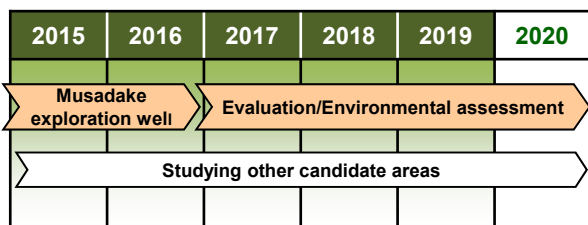
- Japan government has a plan of mid-long term offshore production tests concerning sand layer type methane hydrate. JAPEX is aiming to start the project for commercial production taking a leading position until 2027
- Established Japan Methane Hydrate Operating Co., Ltd.(JMH) on Oct. 2014
- JAPEX is joining JMH as a front runner to lead Methane Hydrate business

CCS verification test



- Established Japan CCS Co., Ltd. on 2008 to conduct CCS business both public and private sectors
- Starting CO2 indentation into wells and monitoring them later 2016
- Focusing on stable execution of CCS Verification Test and Accumulation and Establishment of CCS Technology to achieve its implementation after 2020

Geothermal energy



- Planning to explore the 3rd test well in Musadake area on 2016
- Examining business potential based on the evaluation of 3 exploration wells
- Studying other candidate areas except for Hokkaido

IV. Actions in short and medium-term (1)

~ E&P business / Domestic gas business

- Pursuing the best optimal financing mix through practical use of Public Investment/Debt Guarantee Scheme, Project Finance, and others
- Expecting Total amount of required finance on FY3/17-3/21 as 200-220 billion yen
- Appropriating 100 billion yen of own funds into its finance

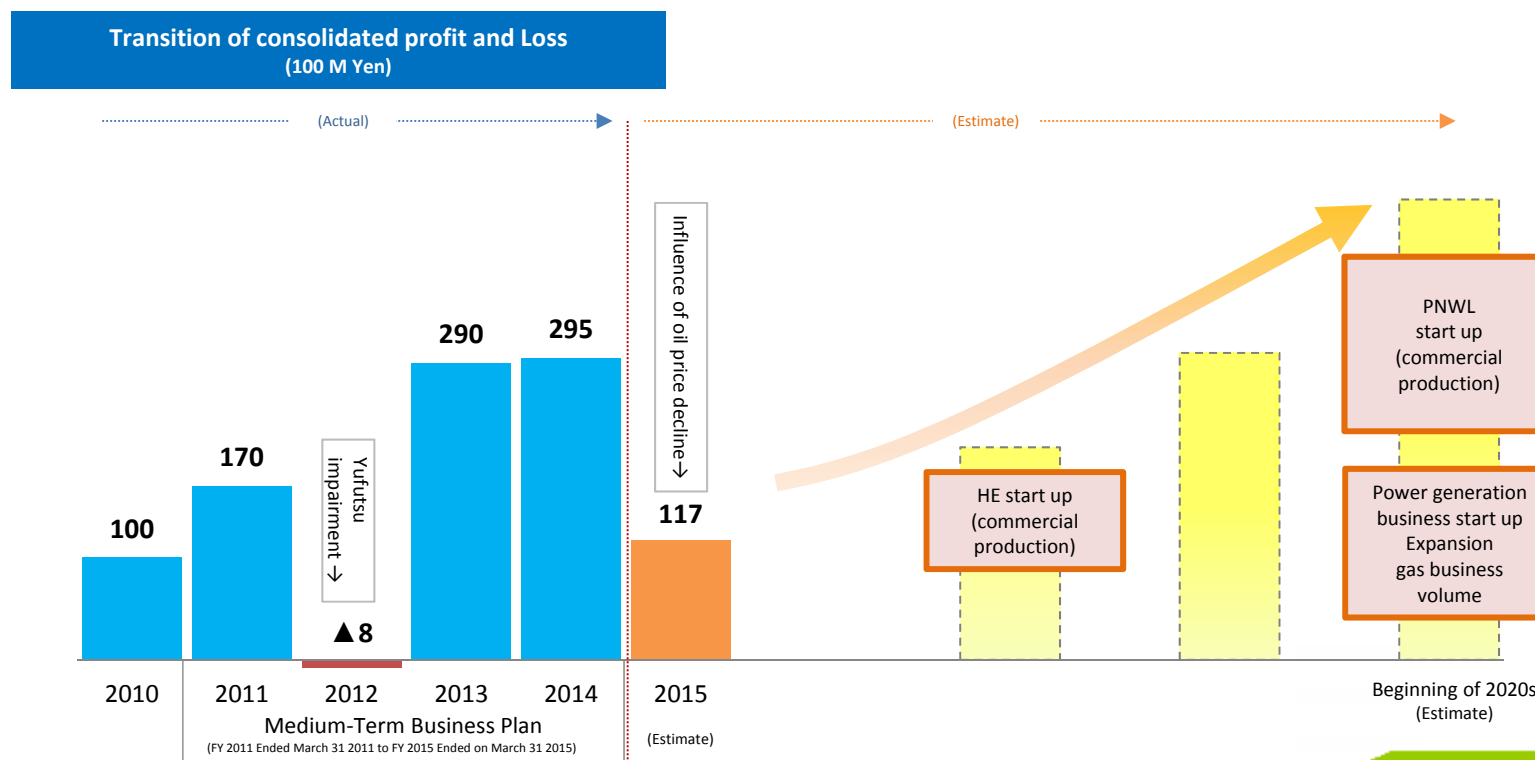
	FY 3/16	FY 3/17	FY 3/18	FY 3/19	FY 3/20	FY 3/21	Financing after FY3/17						
							JAPEX funds	Public investment	Loans	Appropriation of internal allowance	Others		
Canada Oil Sands HE Exploration	◆ Commencement of production						✓		✓	✓			
Iraq Garraf Oil Field Operational Expansion	Pending Approval		◆ Achieving plateau volume of production									✓	
Indonesia Kangean TSB phase 2	◆ Commencement of production									✓			
Canada LNG Upstream Gas Exploration	Step-by-step increasing of production volume								✓	✓			
Canada LNG Liquefaction Business	Pre-FID		◆ FID (targeting mid 2015)			◆ Commencement of LNG production		✓	✓		✓		
Soma LNG Terminal	◆ Commencement of receiving LNG						✓		✓		✓		
Soma Power Generation	Pre-FID		◆ FID (targeting 2016)			◆ Commencement of No.1 plant operation ◆ Commencement of No.2 plant operation					✓		

Note1: For funding method and amount, it is our outlook at the present time, there is a possibility to change.

Note2: Required finance total amount 200-220 billion yen, the total of "JAPEX Funds", "Investment of country etc." and "Loans" in the table

V. Outlook of revenue and profits and shareholder profits

- Even though keeping the trend of recovery until FY3/15, consolidated profit and Loss of FY3/16) is prospecting to decrease significantly.
- Keeping stable dividend even during oil prices declined by planning to secure future profit through completely progress management in ongoing big projects.
- In view of medium-term, we have several potentials to improve our profit dramatically such as Hangingstone Extension (HE) of Canada Oil Sands project, rising Canada LNG (PNWL; Pacific North West LNG) project, and rising business of gas sales expansion and power generation through Soma LNG terminal as well as expectation of oil price recovery.



VI. CSR (Corporate Social Responsibility)

~ Promotion priority agenda "SHINE"

**Pursue efforts to priority agendas "SHINE"
in order to respond expectations and requests from all stakeholders
and grow as a trusted global company**

S : S table & Sustainable Energy Supply	⇒ Development of New Technologies
H : H SE as Our Culture	⇒ HSE Management, Global Warming Countermeasure etc.
I : I ntegrity & Governance	⇒ Corporate Governance, Compliance etc.
N : Being a Good N eighbor	⇒ Coexistence and Development with local communities
E : The E mployer of Choice	⇒ Diversity, HR Development etc.

Recruit and develop various human resources

Ratio of female manager
⇒ 2014: 3.4%
until **2020**: **3 times**

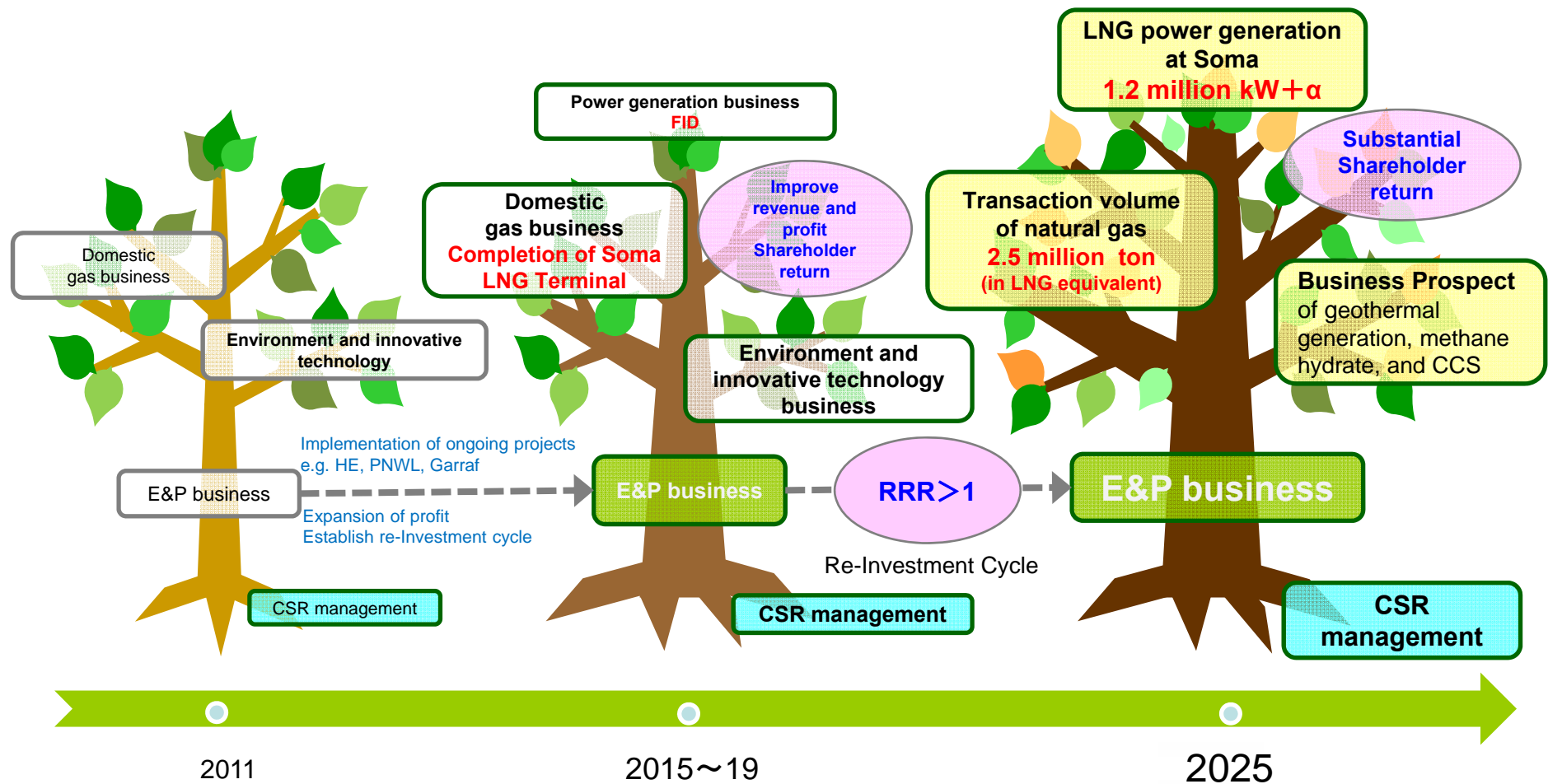
Improve HR development
⇒ Improve individuals' capabilities on their versatility or specialty

VII. Summary

~ Image of Leap on 2025

“Transformation to Integrated Energy Company around Oil and Gas E&P Business”

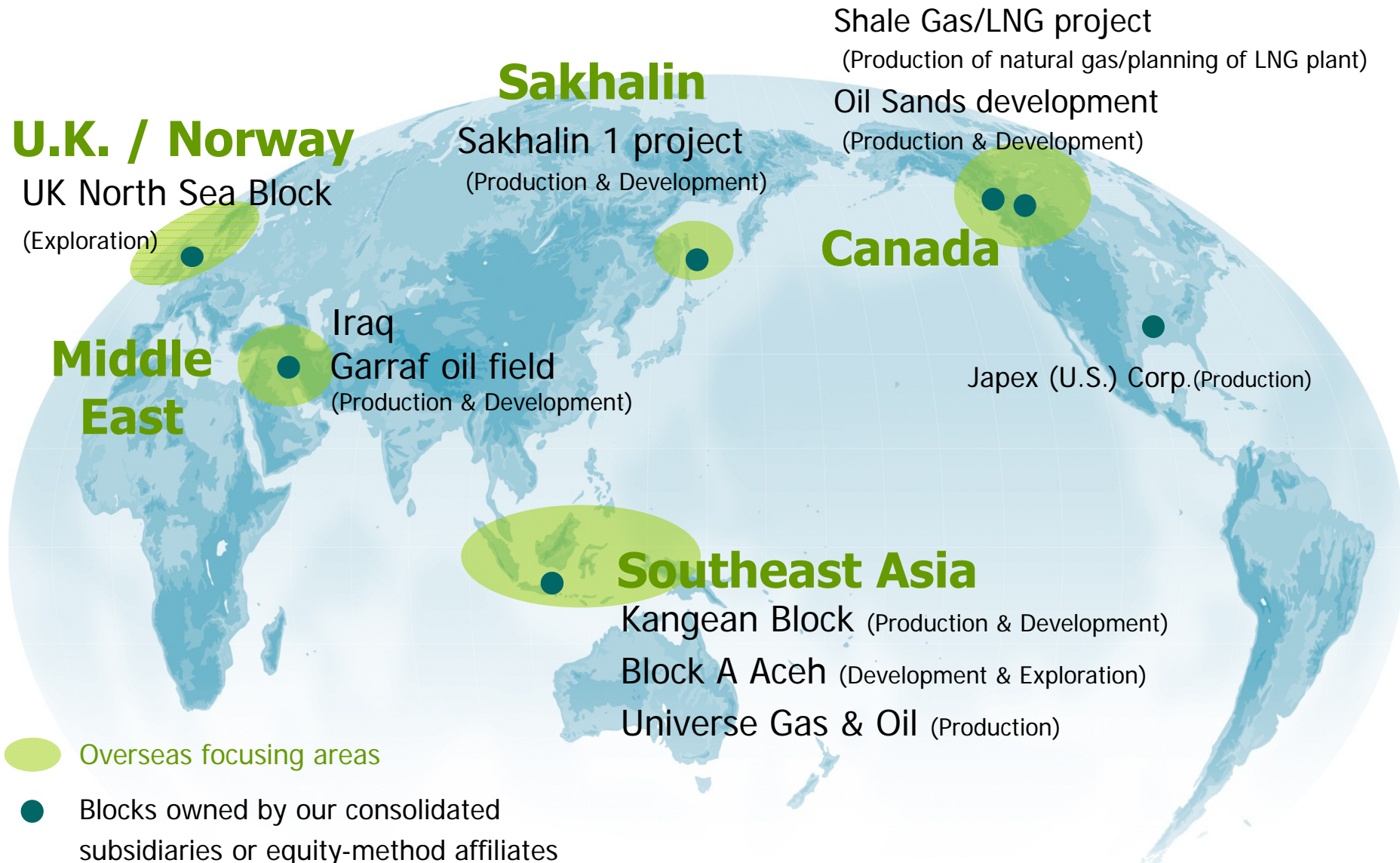
- If we liken our business into a tree, E&P business will be “root” and “trunk”, and we will grow each business around E&P business as “the well-proportioned wood”



<Appendix>

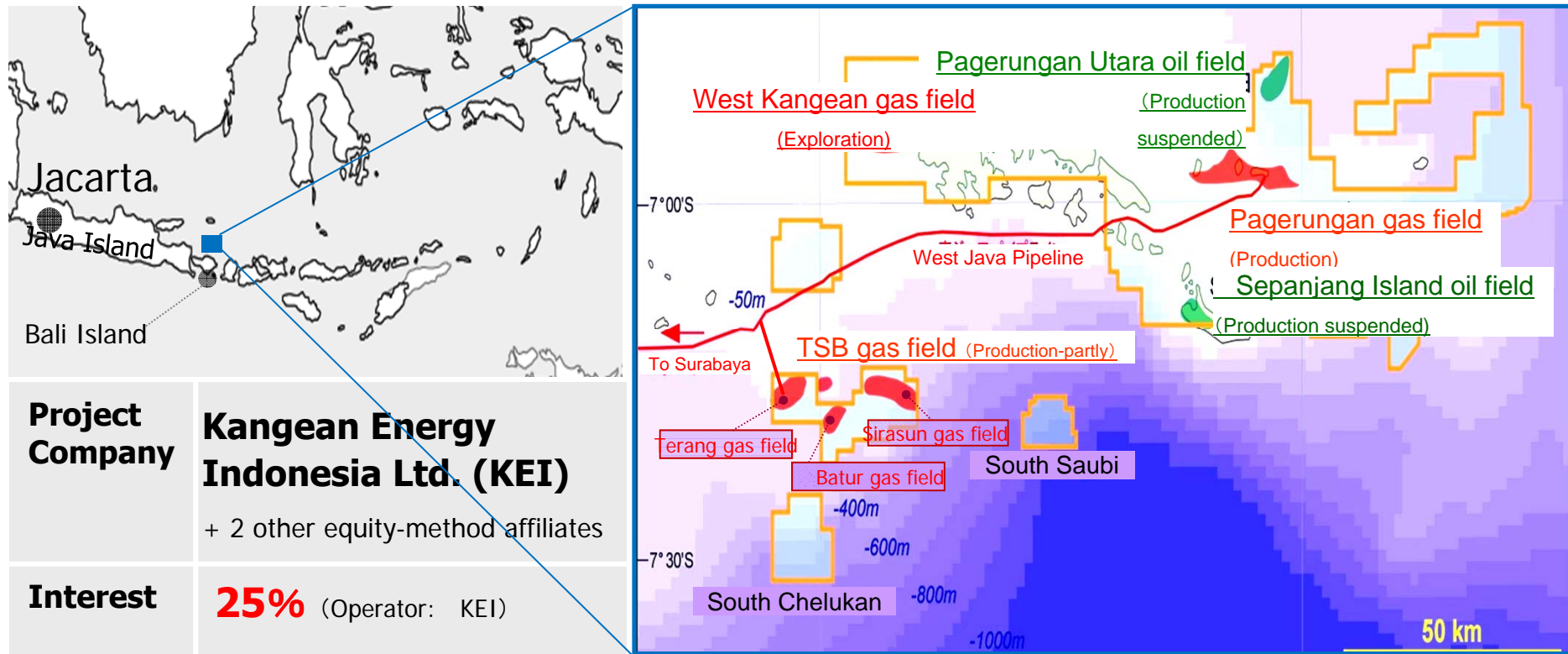
Current status of business

VIII. Current status of business (1)



VIII. Current status of business (2)

~ Indonesia: Kangean Block



Project Company	Kangean Energy Indonesia Ltd. (KEI) + 2 other equity-method affiliates
Interest	25% (Operator: KEI)

■ **Current gross production : Crude oil equivalent of around 50,000 bbl/d**

- **TSB gas field**
(Phase1) *Terang* : Commenced production in end-May 2012.
Maximum production 0.3billion cf/d
(around 50,000boe/d in crude oil equivalent)
(Phase2) *Sirasun, Batur* : Preparing for development

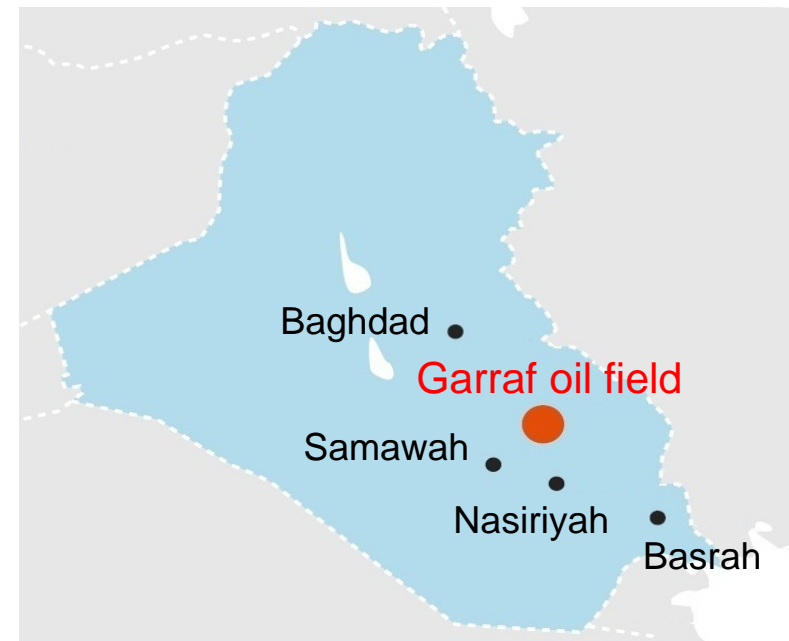
□ **South Saubi Structure: Preparing for prospecting in 2016**



VIII. Current status of business (3)

~ Iraq: Garraf Oil Field

Project company	Japex Garraf Ltd.	
Interest	30% (cost share 40%) Operator : PETRONAS	
Field	Garraf	Production



■ Time Schedule

2013	Commenced production August 31 from the Garraf oil field Average daily production : Around 64,000 bbl/d
2014~ 2016	Average daily production(Dec.31 ,2014) : Around 84,000 bbl/d Plan to increase production gradually
2017~	Plan to achieve plateau production target of 230,000 bbl/d

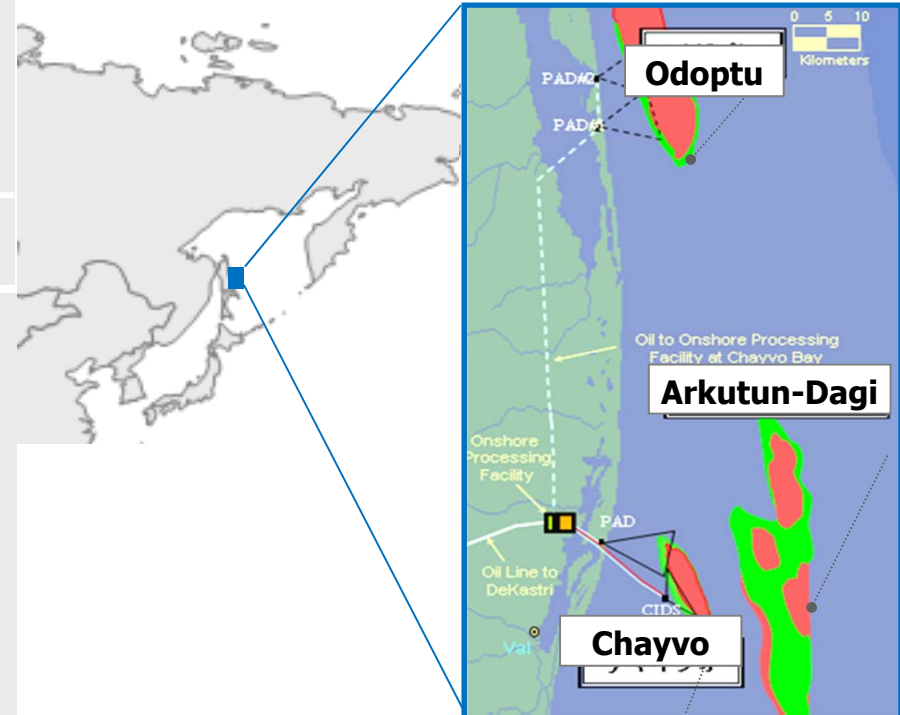
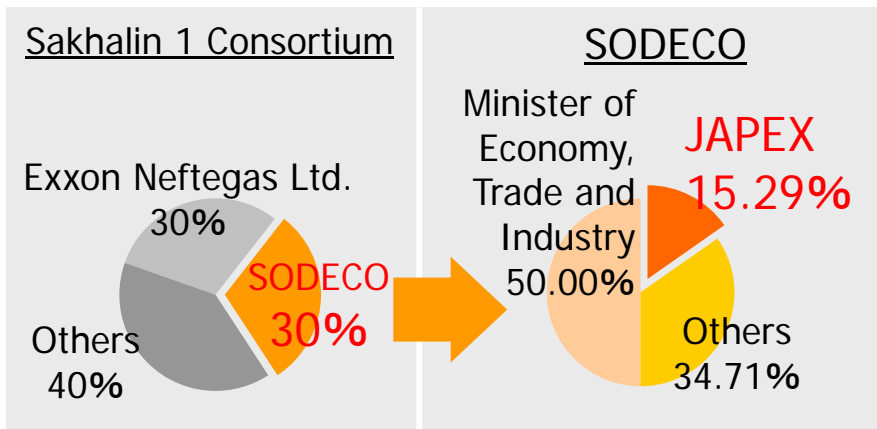


VIII. Current status of business (4)

~ Sakhalin 1 project

Project Company	Sakhalin Oil and Gas Development Co., Ltd. (SODECO)
------------------------	---

Interest	
-----------------	--



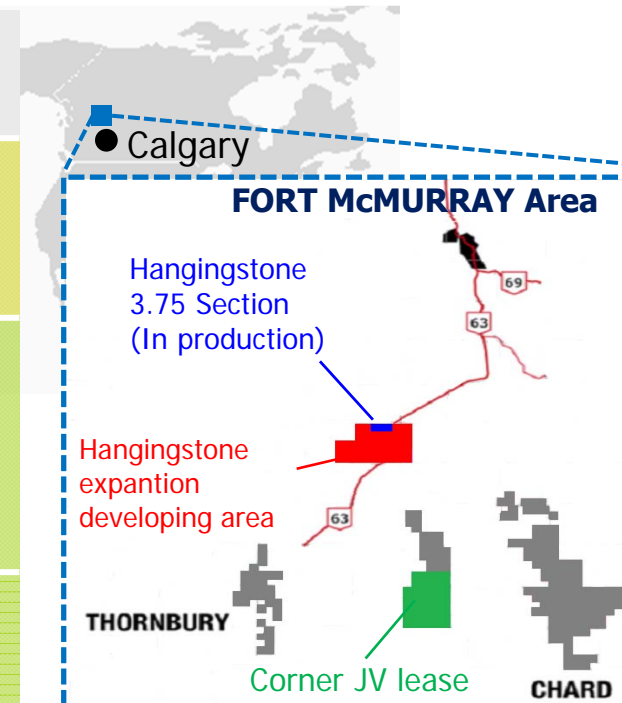
Block	Chayvo, Odoptu, Arkutun-Dagi	<p>In Production at each fields</p> <p>※Commencement of Production from Jan. 2015 at Arkutun-Dagi</p> <p>Total production of Crude Oil: Around 180,000 bbl/d*</p> <p>※ average production rate per day on 2015 based on JAPEX's Estimates</p>
--------------	------------------------------	--



VIII. Current Status of Business (5)

~ Canada Oil Sands project

Project Company	Canada Oil Sands Co., Ltd. (CANOS) Operator : Japan Canada Oil Sands Ltd. (JACOS)	
Block	Hangingstone 3.75 section 100% Interests Around 5,000~6,000 bbl/d	In production (Cumulative production : 33.23M bbl as of end of Mar. 2015)
	Expansion project of undeveloped part of Hangingstone area 75% Interests Additional production of 20,000 bbl/d at the maximum	In development
	Coner JV lease 12% Interests	In appraisal
	Other bitumen leases (include Corner, Chard & Thornbury)	Considering future activities



■ Schedule of expanded development in Hangingstone

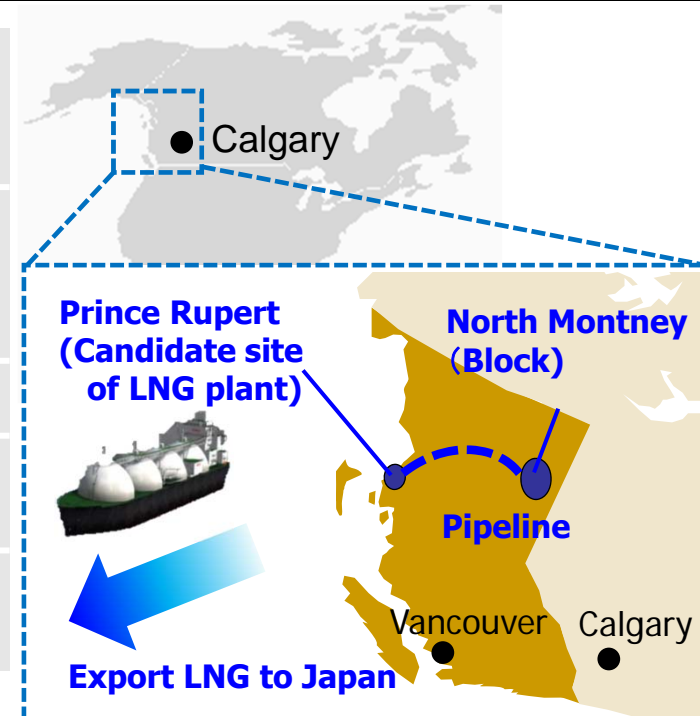
2013	Feb. : Started early civil work for construction facilities Sep. : Concluded EPC contracts for major facilities
2014	Aug. : Completed early civil work and commenced construction of Facilities
2015	Feb. : Completed Exploration of Horizontal Wells
2016	Commencement of production (Planned)



VIII. Current status of business (6)

~Canada Shale Gas and LNG project

	Shale Gas development and production project (Up-stream)	LNG project (Middle-stream)
Block/ Candidate site	North Montney, British Columbia, Canada	Lelu Island, the Port of Prince Rupert, British Columbia, Canada
Interest	10% Interest	10% Equity
Operator	PETRONAS (Including subsidiaries)	PETRONAS (Including subsidiaries)
Current status	In production and sales of natural gas	In FEED of the facilities



■ Project Schedule

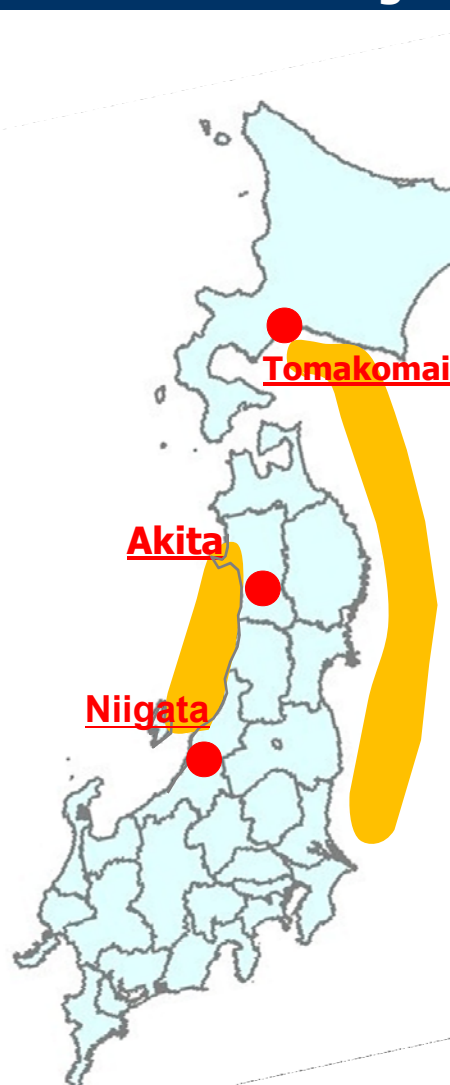
26 Apr. 2013	Conclusion of contract
Dec 2013	Acquired the export license
In 2015 (After Government Approval)	FID of LNG plant (Planned)
From 2015	Construction of LNG plant
From 2019	Starting LNG production (12MM ton/y)



VIII. Current status of business (7)

~ Domestic E&P business

Aiming to strengthen profitability of domestic business



- **Maximization of asset values of existing oil and gas fields**
- **Compensation of production volume and recovery of proved reserve availability**
 - ⇒ Examination and implementation of IOR/EOR
 - Artificial picking at Numanohata SK No.4 well
 - Implementation of WAG at Iwafune-oki oil and gas field etc.
- **Exploration of Land area**
 - ⇒ Prospecting of Minami Kashiwazaki Loc.A1
 - ⇒ Physical exploration survey in Niigata Uonuma area
- **Development of domestic shale oil (Tight oil)**
 - ⇒ Verification of validity in fracturing at Fukumezawa oil field (optimization of the method)
 - ⇒ Development of tight oil at Akita Ayukawa oil and gas field
- **Excavation of new domestic E&P opportunities**
 - ⇒ Potential evaluation of exploration in wide sea area
 - ⇒ Pursuing potentials in boundary of land and sea (shallow sea)

VIII. Current status of business (8)

~ Soma LNG terminal and power generation business

■ Soma LNG terminal facilities

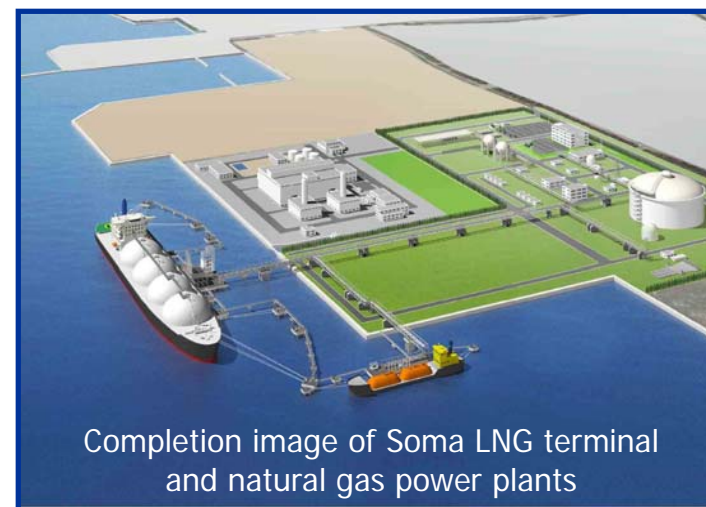
Site	Shinchi-Town, Fukushima Pref. (No.4 wharf area of Soma Port)
Type and capacity	One LNG Tank of Aboveground Style/PC type containing 230,000kl
Latest condition	Under construction of LNG terminal and connecting pipeline
Commencement of operation	Mar. 2018 (Planned)

■ Outline of the plan of Soma natural gas power plant (tentative name)

Driving force	Gas turbine and steam power (combined cycle system)
Output power	About 1.2 million kW (about 600 thousand kW × 2)
Current status	Establishment of Fukushima Gas Power Co., Ltd. / Proceeding environmental assessment
Commencement of operation	Plant No.1 Jan. 2020 (planned) Plant No.2 Apr. 2020 (planned)

■ Schedule of Soma LNG terminal

Nov. 2013	Final Investment Decision (FID)
Nov. 2014	Commencement of construction
End of 2017	Completion of the terminal (planned)
End of 2017	Receiving the 1 st LNG tanker (planned)
Mar. 2018	Commencement of operation (planned)



Completion image of Soma LNG terminal
and natural gas power plants

VIII. Current status of business (9)

~ Environment and innovative technology ①

Solar power business

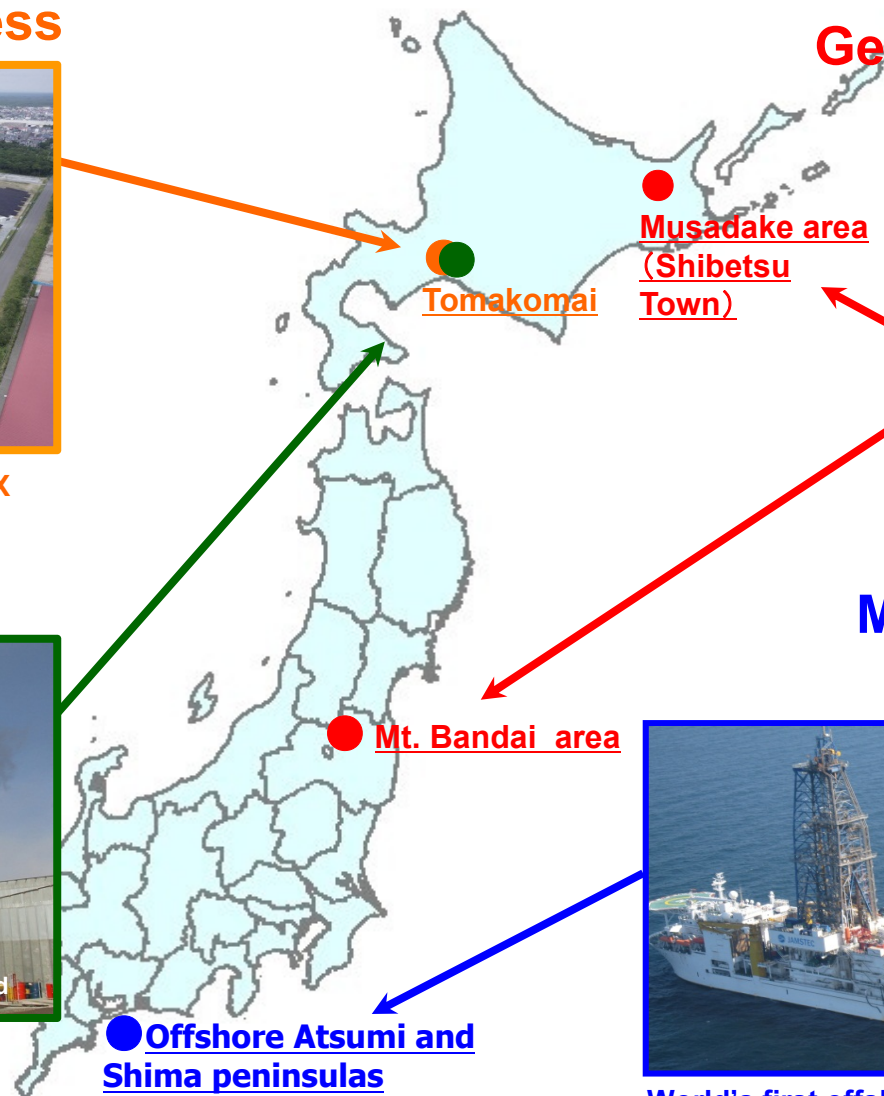


Mega-solar power station at JAPEX Hokkaido district office

CCS



Drilling of CCS observation well



Geothermal energy



Drilling operation of Musadake area

Methane Hydrate



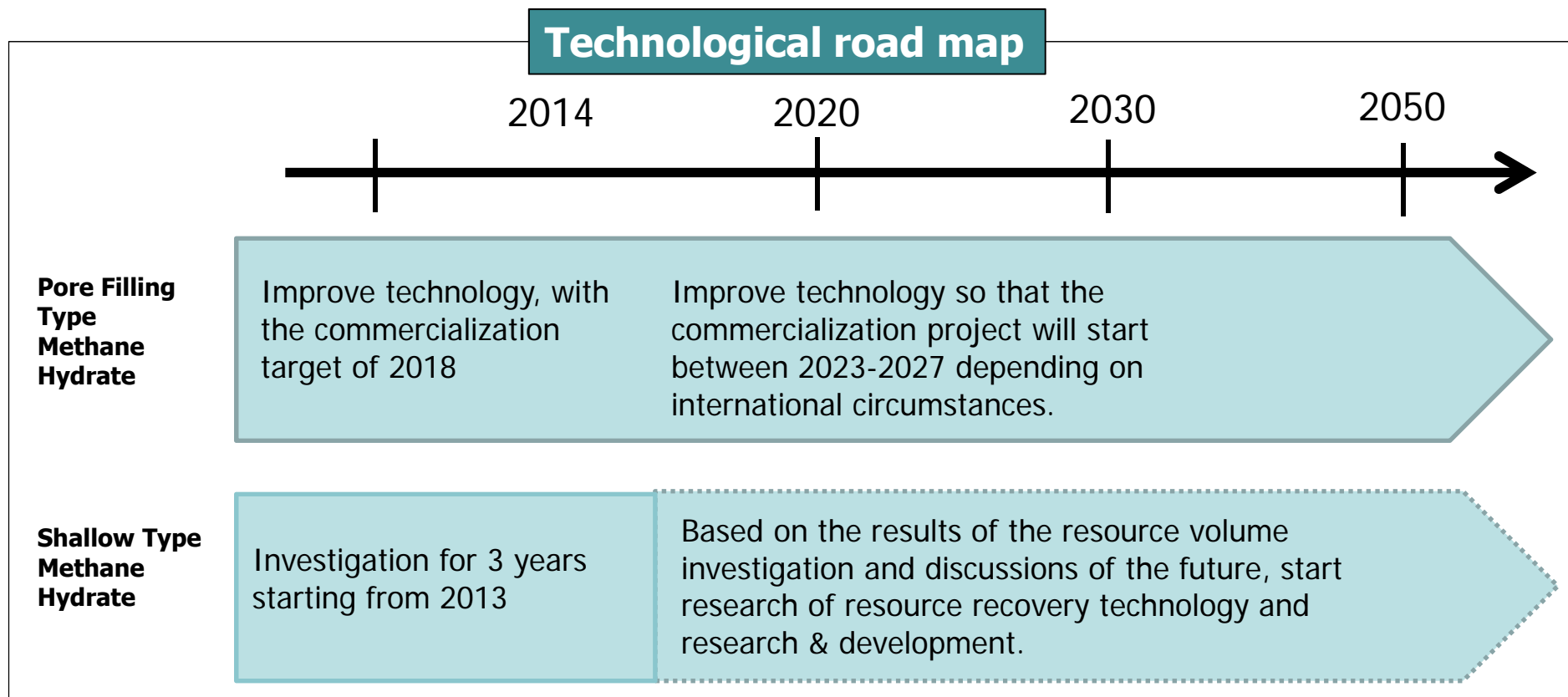
World's first offshore methane hydrate gas production tests

Photo provided by JOGMEC

VIII. Current status of business (9)

~ Environment and innovative technology ② - Methane Hydrate

- Japanese Government is planning Medium-to-Long-Term Offshore Production test of Methane Hydrate in 2016-2018.
- JAPEX will aim for becoming contractor of the project through Japan Methane Hydrate Operating Co., Ltd. and will contribute to developing technologies.
- JAPEX will aim for starting project for commercialization lead by our company by around 2027.



Referred from "Ocean energy mineral resources development plan" by Ministry of Economy, Trade and Industry on Dec. 2013

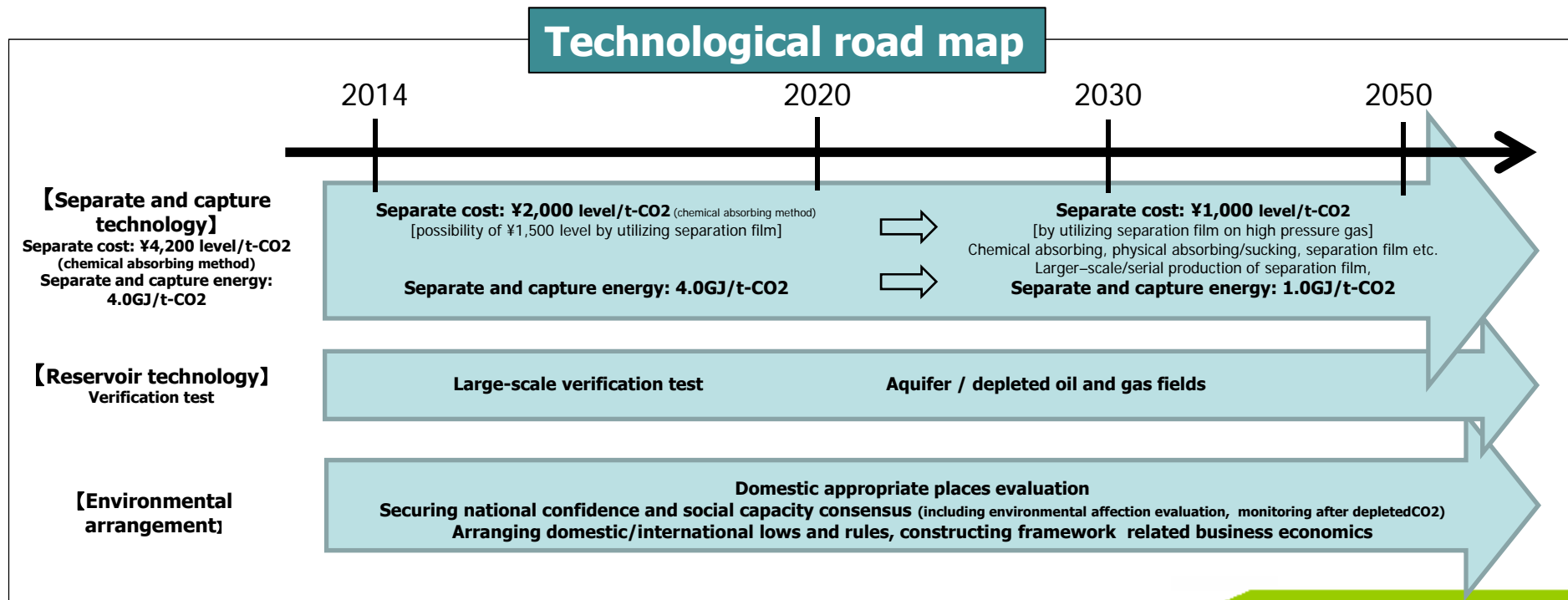
VIII. Current status of business (9)

~ Environment and innovative technology ③ - CCS

- Japan CCS Co., Ltd has been established in 2008, and project started by both public and private.
- JCCS has been assigned as a contractor of verification test from the government, and planning to start injection and monitoring from 2016.
- JAPEX is targeting practical use of CCS from 2020. In order to achieve this target, JAPEX will make a continuous effort to implement CCS verification test, and will accumulate and establish CCS technologies.

CO2 capture and Storage (CCS) Roadmap

referred from "Energy related technologies development roadmap" by Ministry Economy, Trade and Industry



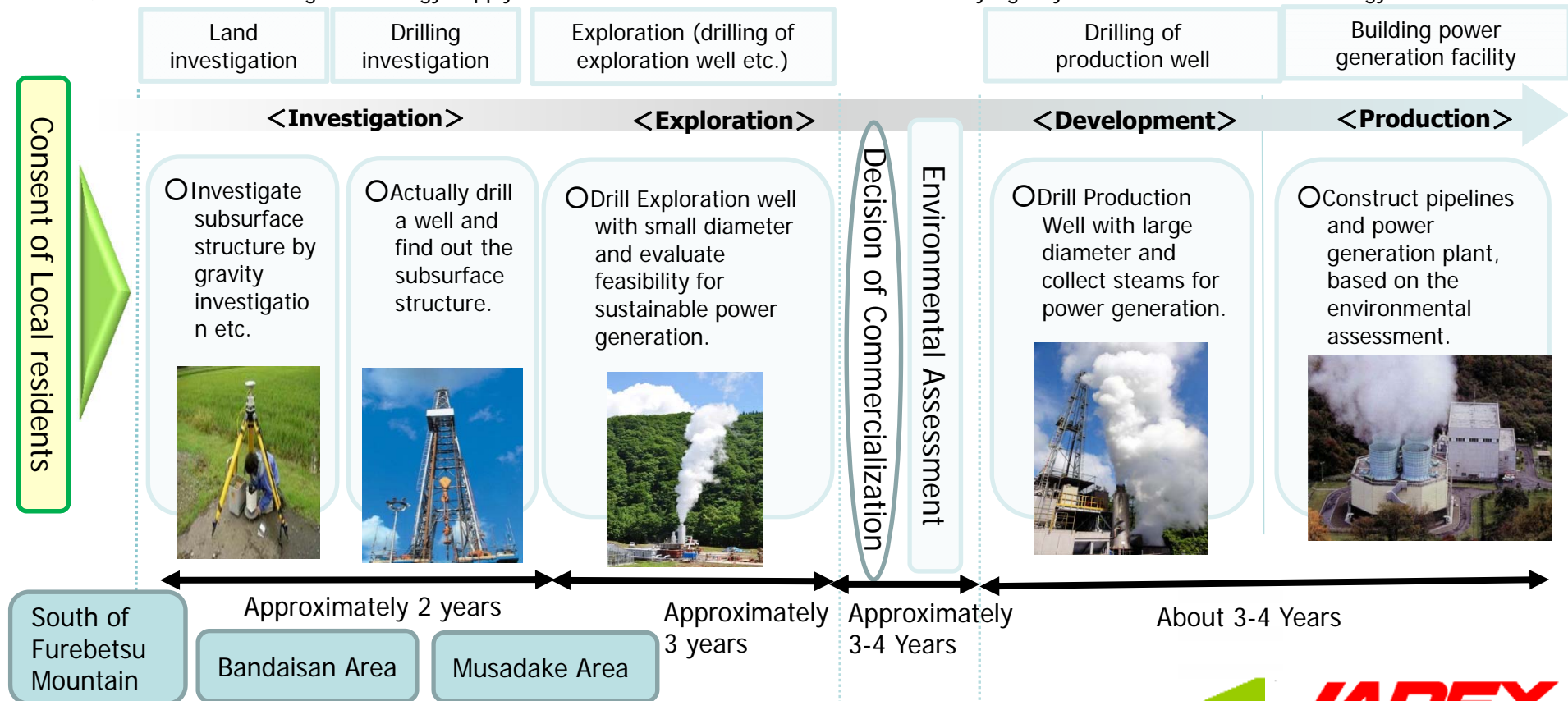
VIII. Current status of business (9)

~ Environment and innovative technology ④ - Geothermal

- For Musadake and Bandaisan area, planning to commence operation around Mid-2020th.
- Will work on other high potential areas including southern region of Furebetsu Mountain, with the consent of local residents.

Roadmap to development of geothermal power

(Model case from "Long term Energy Supply and Demand Forecast Sub-Committee" made by Agency for natural resources and energy)



Acronyms

- BOE(D) Barrels of Oil Equivalent (per Day)
- CCS Carbon dioxide Capture and Storage
- COP Conference Of the Parties
- CSR Corporate Social Responsibility
- E&P Exploration and Production
- FID Final Investment Decision
- GHG Greenhouse Gas
- HE Hangingstone Expansion
- HSE Health, Safety and Environment
- IOR (EOR) Improved (Enhanced) Oil Recovery
- JCC Japan Crude Cocktail
- JOGMEC Japan Oil, Gas and Minerals National Corporation
- LNG Liquefied Natural Gas
- MH Methane Hydrate
- P/L Pipeline
- PNWL Pacific North West LNG
- ROE Return on Investment
- RRR Reserves Replacement Ratio
- SODECO Sakhalin Oil & Gas Development Co., Ltd.
- TSB Terang, Sirasun, Batur
- WTI West Texas Intermediate