



Business Development Strategy

Towards a Net Zero Carbon Society by 2050

January 27, 2021

Basic Policy on Management Towards a Net Zero Carbon Society by 2050

1

INPEX will proactively engage in energy structure reforms towards the realization of a net zero carbon society by 2050, while responding to the growing energy demands of Japan and the world and fulfilling its responsibility for the development and stable supply of energy over the long-term.

2

The company will set climate change response goals to achieve its own net zero carbon emissions by 2050, to contribute to the realization of the Paris Agreement objectives in relation to climate change.

3

INPEX will actively promote five business pillars through the following three initiatives, in order to offer solutions responding to the needs of society in an age of transformation towards a net zero carbon society.

1. Leverage the company's strengths (knowledge and experience)

- ▶ INPEX will make the most of its strengths such as its management, technical and operational experience gained in Japan and around the world to select business targets and apply its management resources including human resources, finances and business knowledge.

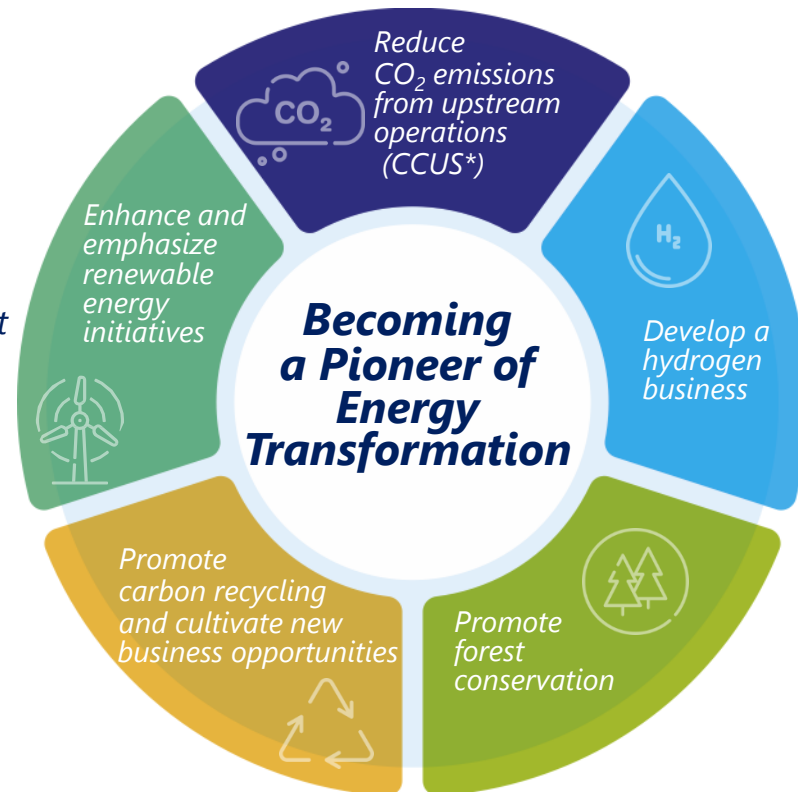
2. Strengthen collaboration with industry, academia and government

- ▶ Responding to changing times requires innovation and the realization of new business models. INPEX will promote long-term ties and collaboration with industry, academia and government in a broad spectrum of business fields.

3. Utilize policy support measures

- ▶ The company will collaborate on the improvement of policy frameworks and promote rapid and efficient initiatives making use of policy incentives.

* Carbon dioxide **C**apture, **U**tilization and **S**torage



Climate Change Goals

- INPEX has set its own goals to contribute to realizing a net zero carbon society as outlined in the Paris Agreement.*¹ *1: International treaty with the goal of keeping average global warming to well below 2 degrees Celsius

2050

NET ZERO*²

in absolute emissions
(Scope 1+2)

*2: on INPEX equity share basis

2030

30% OR MORE*³

reduction of net carbon intensity
(Scope 1+2)

*3: in comparison with 2019

Scope 3

REDUCTION

work together with
all relevant stakeholders to
address challenges
across the value chains

TO ACHIEVE THESE GOALS INPEX WILL...

- ▶ Promote CCUS;
- ▶ Strengthen renewable energy initiatives;
- ▶ Promote forest conservation for CO₂ absorption;
- ▶ Maintain current low methane emissions intensity of approximately 0.1%*⁴ (calculated by methane emissions / natural gas production); and
- ▶ Aim to eliminate routine flaring by 2030.*⁴

*4: in INPEX-operated projects

PROMOTE THE ONGOING DISCLOSURE OF CLIMATE-RELATED INFORMATION IN LINE WITH TCFD RECOMMENDATIONS.

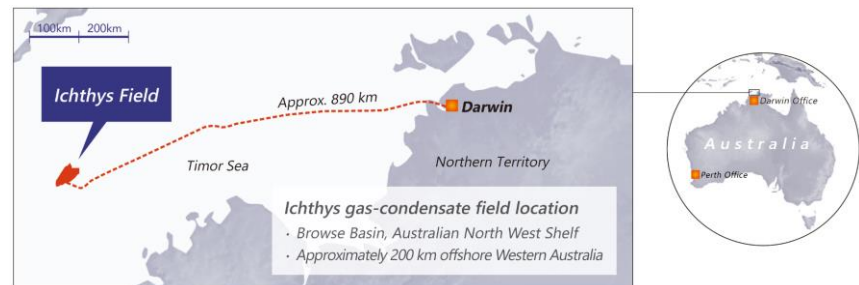
- *Taking advantage of its track record and technical expertise in CCUS (Japan's first CCUS project commenced at INPEX's Kubiki Oil field in Niigata in 1988), INPEX seeks to apply CCUS to achieve safe storage and efficient utilization of CO₂ in Japan and overseas including the Ichthys LNG Project in Australia.*
- *INPEX promotes a shift to natural gas and carbon neutral LNG in conjunction with efficient use of energy and implementation of energy saving measures across its entire business including exploration, development and production.*

CO₂ EOR Demonstration Tests in Niigata, Japan

- *INPEX plans to conduct CCUS (CO₂ EOR) demonstration tests at one of its onshore oil fields in Niigata, Japan, applying EOR recovery improvement technology (CO₂ foam technology) being developed by the company.*
- *The demonstration tests will consist of drilling two new wells in 2022, analyzing reservoir core samples and conducting CO₂ injection tests. The tests are expected to boost the application of CCUS technologies in Japan as well as CO₂ EOR technologies at INPEX's upstream assets overseas.*

Ichthys LNG Project CCS

- *INPEX is evaluating the feasibility of sequestration of CO₂ captured at the INPEX-operated Ichthys LNG plant in Darwin, Australia.*
- *An appropriate injection site is to be selected based on detailed evaluation.*



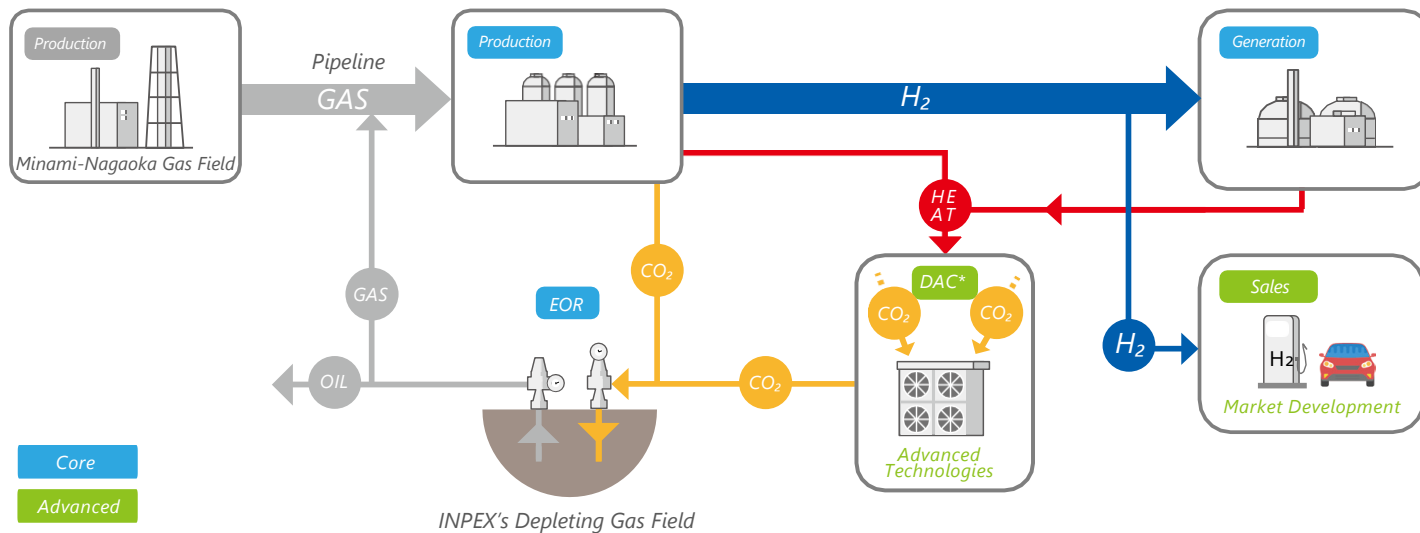
* **Enhanced Oil Recovery.** In this document EOR includes Enhanced Gas Recovery.

4 | Hydrogen Business (1)

- Envisioning the advent of a hydrogen era, INPEX aims to expand its energy business to include the production and supply of hydrogen.
 - ▶ Utilize natural gas from INPEX assets to produce “carbon-free hydrogen” through a natural gas reforming process and conducting CCUS with the CO₂ emitted from this reforming process.
 - ▶ Enhance R&D activities to establish a hydrogen value chain in collaboration with external companies and organizations.
 - ▶ Aim to create a hydrogen society at an early stage through collaborative cross-sector projects on the social implementation of hydrogen as a member of the Japan Hydrogen Association.

Concept of Integrated Hydrogen Business Test Project in Kashiwazaki, Niigata, Japan

- An integrated “all-in-one” demonstration test is planned in Niigata, Japan, taking advantage of INPEX’s upstream technologies and domestic natural gas supply infrastructure. INPEX will demonstrate a hydrogen business model delivering hydrogen produced at INPEX’s overseas natural gas assets to Japan.



* Direct Air Capture

- ▶ INPEX is evaluating ammonia production and liquified hydrogen business opportunities as ways to transport and import hydrogen produced at INPEX upstream assets overseas to Japan.
- ▶ These opportunities are expected to eventually lead to a carbon-free energy business leveraging INPEX's natural gas assets outside of Japan.

Clean Ammonia Business in Abu Dhabi

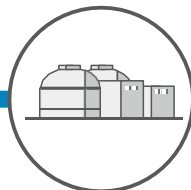
- INPEX is evaluating opportunities to produce hydrogen and ammonia from natural gas produced in Abu Dhabi. CO₂ from the gas reforming process will be utilized in CCUS / EOR at an onshore Abu Dhabi oil field in which INPEX has a participating interest, with the objective of realizing clean ammonia.
- The ammonia is to be imported to Japan using marine vessels and supplied to Japanese utilities as clean fuel for power plants, contributing to the reduction of CO₂ emissions.
- A feasibility study is being proposed to ADNOC (UAE) and discussions with ADNOC and domestic partners are ongoing (as of 2021).

Carbon-Free Hydrogen Business outside Japan

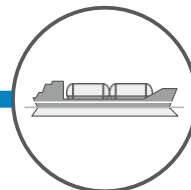
- INPEX is examining ways to participate in a hydrogen liquefaction and offloading business to develop its own hydrogen business abroad.
- The company is making use of knowledge and experience in natural gas liquefaction (LNG).



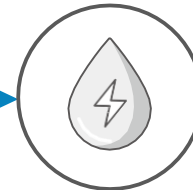
Hydrogen Production



Liquefaction



Marine Transportation



Use

Enhance and Emphasize Renewable Energy Initiatives

- *INPEX will accelerate its initiatives both in Japan and around the world relating to geothermal power generation applying oil and gas development technologies, as well as offshore wind leveraging experience in the construction and operation of offshore floating facilities gained at operations sites overseas.*

Geothermal

- *High potential in Japan and Indonesia where INPEX has considerable business experience.*
- *Applying oil and gas development technologies such as geological / geophysical surveys and drilling.*
- *Planning further development of Sarulla in Indonesia, one of the world's largest geothermal projects.*
- *Domestic track record of conducting development studies, exploratory drilling and flow tests in the Oyasu area of Akita Prefecture and the Amemasu area in Hokkaido, Japan.*



Sarulla Geothermal Independent Power Producer (IPP) Project

Offshore Wind

- *Plans to realize fixed-bottom wind project offshore Noshiro, Mitane and Oga in Akita Prefecture, Japan.*
- *Ability to apply business management experience of designing and operating floating structures for crude oil and gas production at Ichthys and elsewhere.*
- *Plans to create a floating offshore wind business, which has advantages for first movers, making particular use of INPEX's strengths.*



Generic image of offshore wind

7 | Promote Carbon Recycling and Cultivate New Business Opportunities

- INPEX will promote carbon recycling with the aim of setting up business operations at an early stage, leveraging synergies with its oil and gas business operations.

Acceleration of Methanation Business (towards the supply of carbon-free methane)

- Plans to complete basic technical development in 2021, scale up the test facility in stages while implementing cost reduction measures and achieve commercialization beyond 2030.
- Commenced joint studies with the Australian Federal Institute for Scientific and Industrial Research (CSIRO) in July 2020 towards practical application in Australia, based on the Japan-Australia Carbon Recycling Cooperation Memorandum.



Test facility within Koshijihara Plant
(a NEDO* project)

Artificial Photosynthesis

(towards the supply of hydrogen derived from renewables)

- Participating in the Japan Technological Research Association of Artificial Photosynthetic Chemical Process (ARPCHEM) and in charge of technical development for production of solar hydrogen through catalytic reaction.
- Steady implementation of R&D with aims to ultimately achieve 10% solar energy conversion efficiency; plans to evaluate practical application.
- Installation of artificial photosynthesis panels in Darwin, Australia, the location of the Ichthys onshore plant.



Artificial photosynthesis panels installed in Darwin, Australia

As a member of the "Challenge Net Zero Carbon Innovation" initiative led by the Japan Business Federation (Keidanren), INPEX is implementing the two initiatives listed above. (INPEX Joins Keidanren's "Challenge Zero" Decarbonization Initiative: <https://www.inpex.co.jp/english/csr/topics/20210118.html>)

- INPEX will swiftly pursue initiatives in new business fields showing signs of growth.
 - ▶ The company will accelerate the startup of businesses in new fields through proactive tie-ups with external R&D ventures and research institutions, etc., in addition to internal ventures leveraging in-house resources to the maximum extent.

Specific business prospects

- Improved operational stability and security through pipeline management utilizing drones
- Introduction of DX relating to energy businesses
- Development of methane direct cracking technologies; development of technologies to directly crack methane into hydrogen and carbon
- Carbon materials business; effective use of carbon extracted from the direct cracking of CO₂
- Development of CO₂ extraction, processing and utilization technologies

- *INPEX will promote CO₂ absorption through forest conservation.*
 - ▶ *The company will contribute to forest conservation activities in Indonesia and other countries, mainly by supporting distinguished REDD+* projects, which contribute to climate change response, biodiversity conservation and improved living standards of the local communities.*

Current Projects in Australia

- *CO₂ absorption through eucalyptus tree planting and management and savanna fire management projects.*



Eucalyptus trees grown in plantations in southwestern Australia

Future Projects

- *Starting in 2021, INPEX will support forest conservation mainly through REDD+.*



◀ *Educational support for local communities*

Biodiversity conservation ▶



* **Reducing Emissions from Deforestation and forest Degradation** – a concept defined in the Cancun Agreements (2010) aiming at reduction of CO₂ emissions by controlling deforestation and deterioration through forest management and actively increasing carbon stock through afforestation.

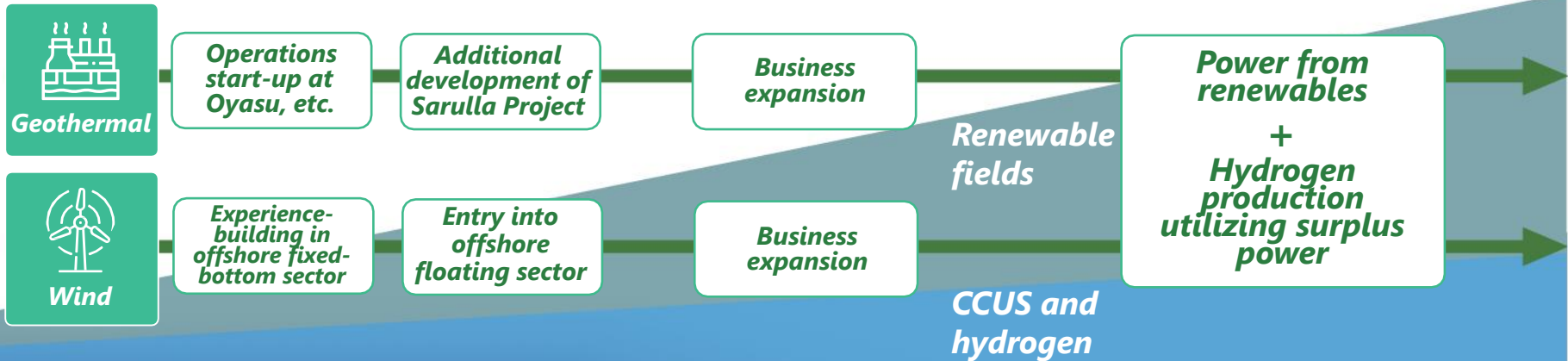
Present

2050

Business implementation

Active business expansion

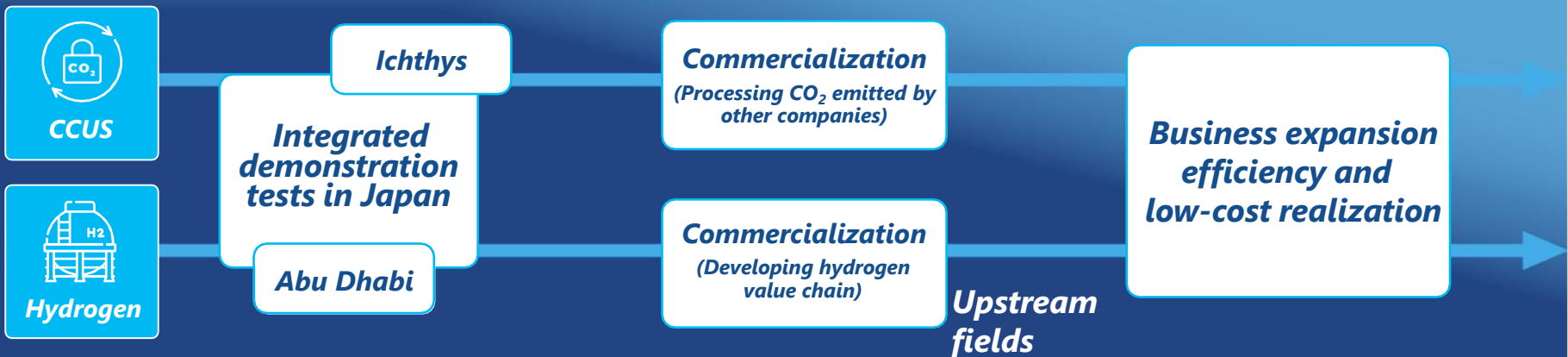
Reinforcement of earning power
Hydrogen business expansion



Reduction of CO₂ from INPEX assets

Business establishment

Reinforcement of earning power as core business



Organization

● Establishment of Hydrogen & CCUS Development Office

New office set up to promote the clean development and supply of crude oil and natural gas as well as a hydrogen business.

● Reorganization as Renewable Energy & New Business Division

Renewable Energy & Power Business Division renamed as Renewable Energy & New Business Division, with the establishment of New Business Development Unit to promote activities in new areas of business.

Human Resources

● In-house recruitment, multiple roles

Leverage company-wide human resources through in-house recruitment and assigning multiple roles to promote initiatives including CCUS, hydrogen, renewable energies and businesses in new fields.

● External HR

Utilize external HR and knowledge by proactively pursuing collaborative efforts with R&D ventures and startups, etc.

● Reinforcement of industry, academia and government ties

Promote cross-sector corporate partnerships and industry, academia and government joint research.



Funds

● Internal venture funds

Establish systems such as internal venture funds to rapidly and flexibly promote new business activities.

● Green bonds

Proactively consider the issuance of green bonds to promote initiatives towards a net zero carbon society.

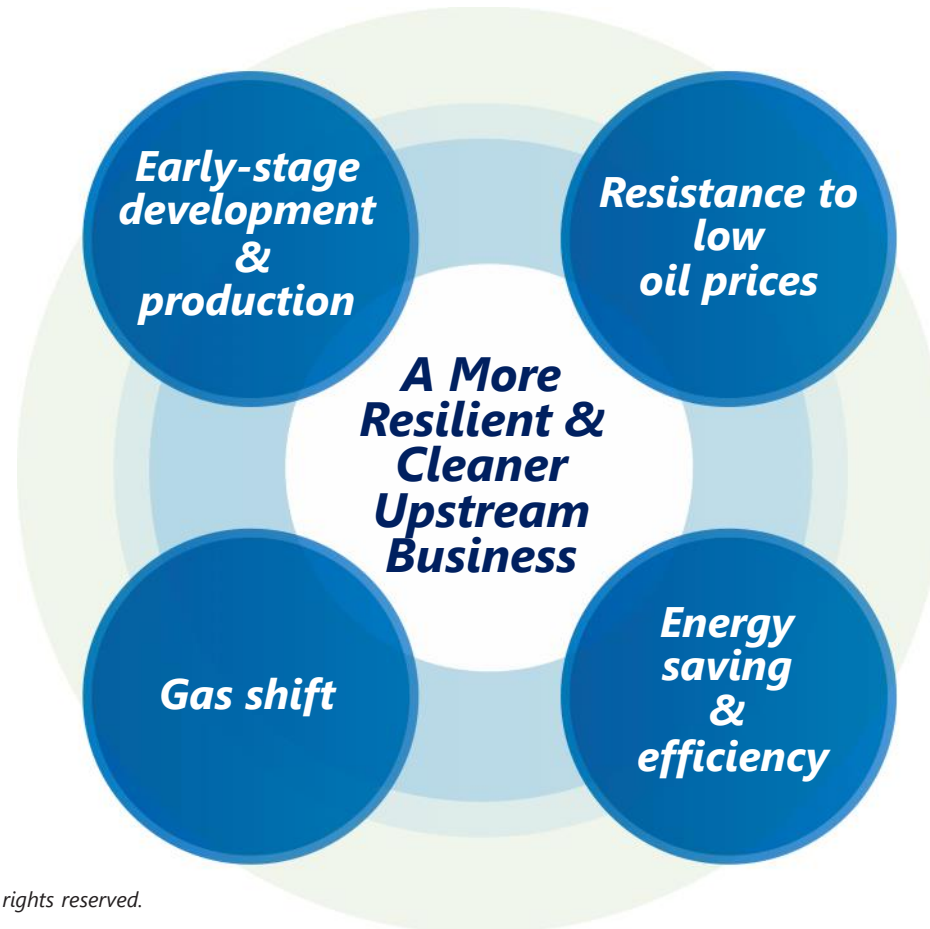
● Government support

Utilize government subsidies provided by NEDO, JOGMEC* and others.

* Japan Oil, Gas and Metals National Corporation

11 | Towards a More Resilient & Cleaner Upstream Business

- INPEX continues to position crude oil and natural gas as important sources of energy, for which demand is expected to remain strong over the medium- to long-term. Meanwhile, it is possible that pressure from the net zero carbon movement to curtail this demand may grow.
- INPEX will continue to position its upstream business as a core business and will work to fulfill its two social responsibilities of providing a stable supply of energy and responding to climate change by strengthening its upstream business and making it cleaner.



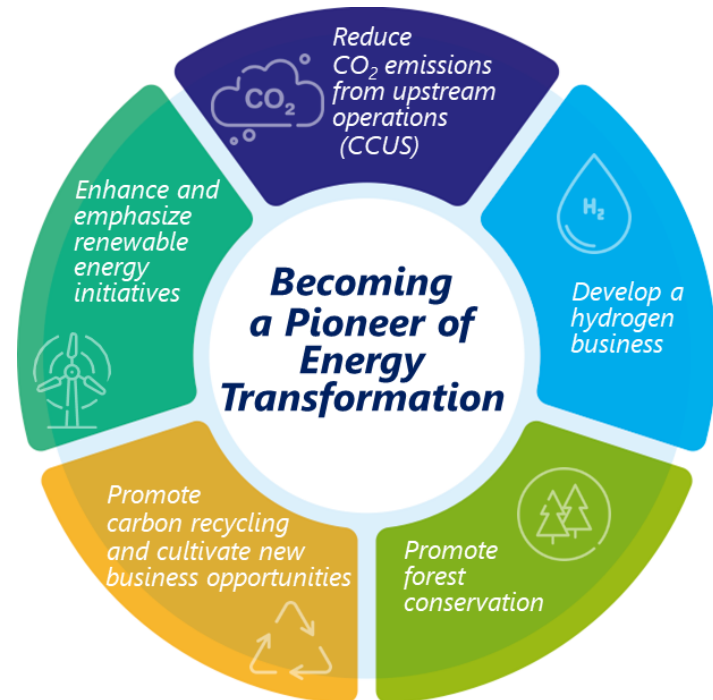
Average annual scale of investment over the next five years

**Scale of investment based on US\$50~60 oil price assumption*



Annual investment outlook of approximately 20~30 billion yen in the medium-term for the five initiatives

Appx. **20~30**
billion yen



13 | *Change of Corporate Name*

*To implement its business development as a unified group, the company will change its Japanese name from Kokusai Sekiyu Kaihatsu Teiseki Kabushiki Kaisha to Kabushiki Kaisha INPEX, effective April 1, 2021.**

INPEX's English name, INPEX CORPORATION, will remain unchanged.

INPEX will contribute to the SDGs including energy, the environment, economic growth and social development by continuing to supply Japan and countries around the world over the long-term with diverse energy in a stable and cleaner way.

INPEX



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Disclaimer

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