

INPEX CORPORATION is Japan's largest exploration and production (E&P) company.

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.

Innovative
Pioneer of Energy
Transformation



Introduction to Kashiwazaki Clean Hydrogen & Ammonia Project

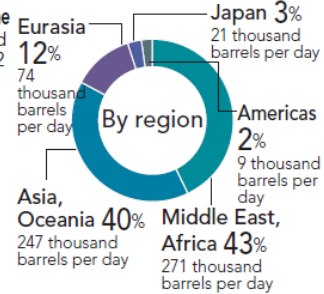
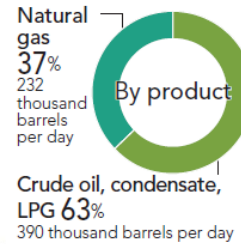
20 November, 2023

INPEX

The Company is currently engaged in projects globally in about 20 countries, including exploration, development and production activities.

Net production volume for fiscal year ended December 31, 2022

622 thousand barrels per day



Production equivalent to



of Japan's annual energy consumption

- > 1 Snorre and Other Projects in Norway
- > 2 Offshore Wind Power Generation Business in the Netherlands
- > 3 Offshore Wind Power Generation Business in the UK

Europe

- > BTC Pipeline Project

- > Offshore North Caspian Sea Contract Area (Kashagan Oil Field and others)

- > ACG Oil Fields

Japan

- > Minami Nagaoka Gas Field
- > Naoetsu LNG Terminal
- > 1,500 km Pipeline Network

- > 1 Abu Dhabi Onshore Concession
- > 2 Abu Dhabi Offshore Oil Fields
- > 3 Onshore Block 4

Abu Dhabi

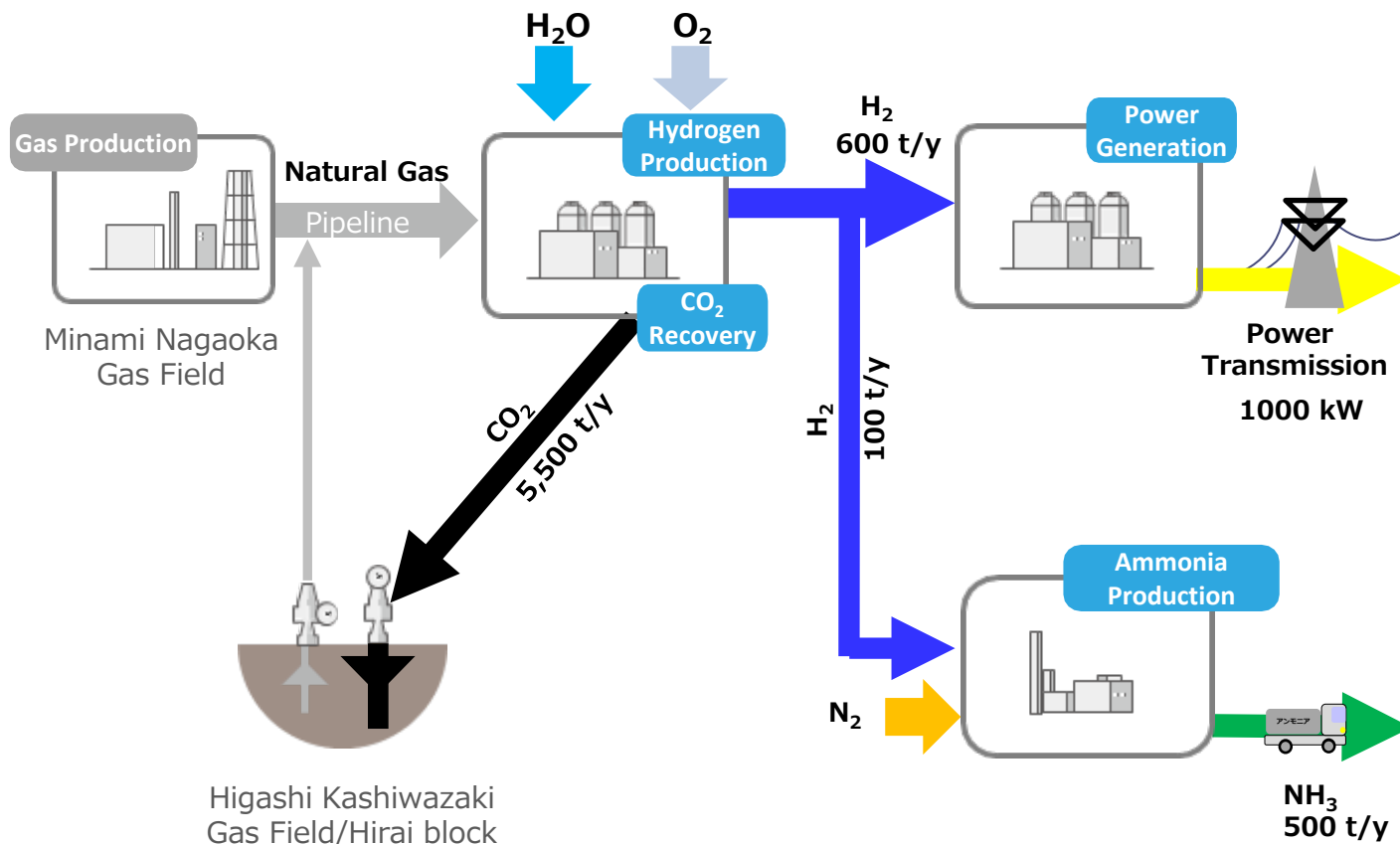
Southeast Asia

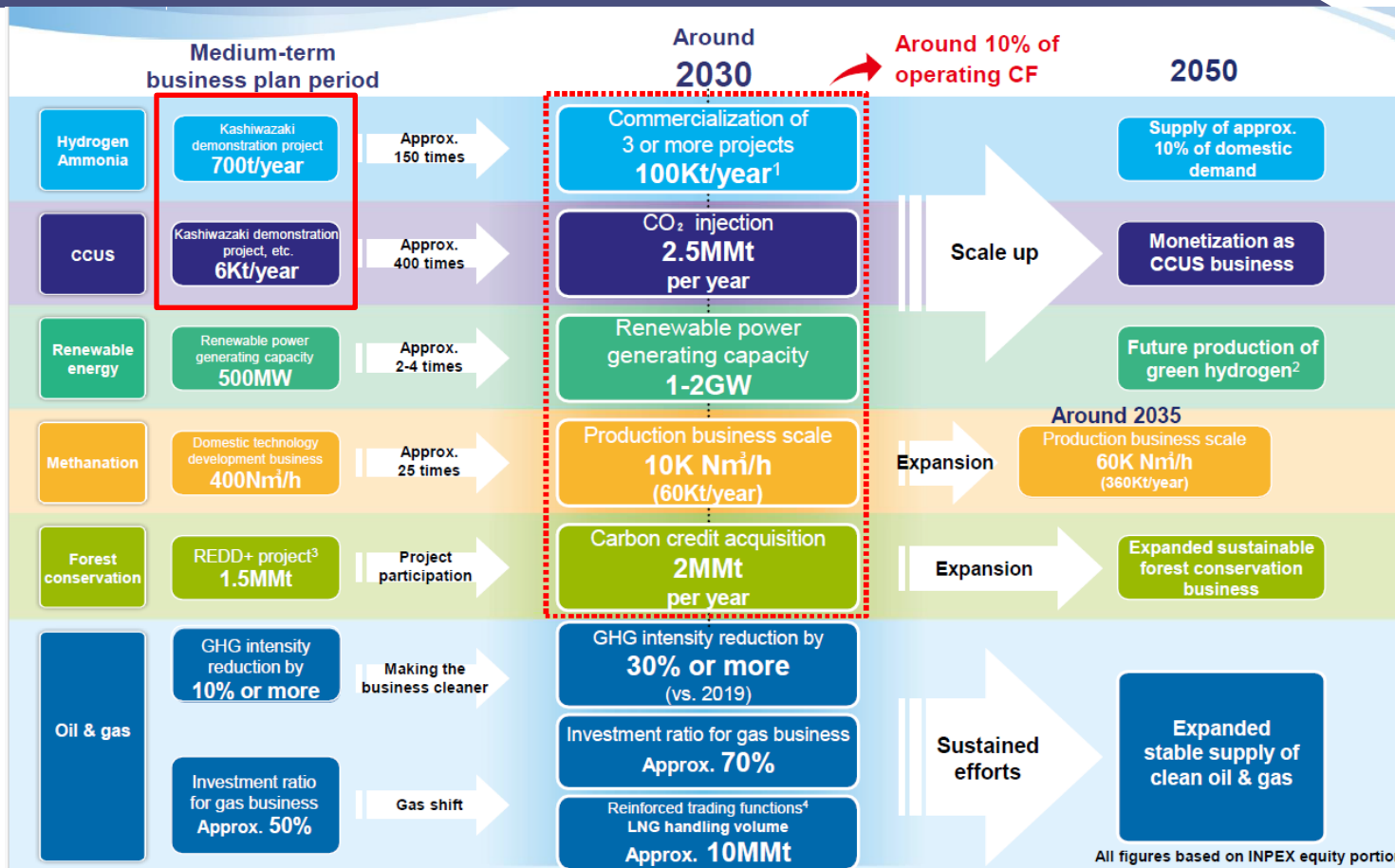
- > 1 Abadi LNG Project
- > 2 Tangguh LNG Project (Berau Block)
- > 3 Block 05-1b/05-1c (Sao Vang and Dai Nguyet Gas Field)
- > 4 Geothermal Power Projects in Indonesia

Australia

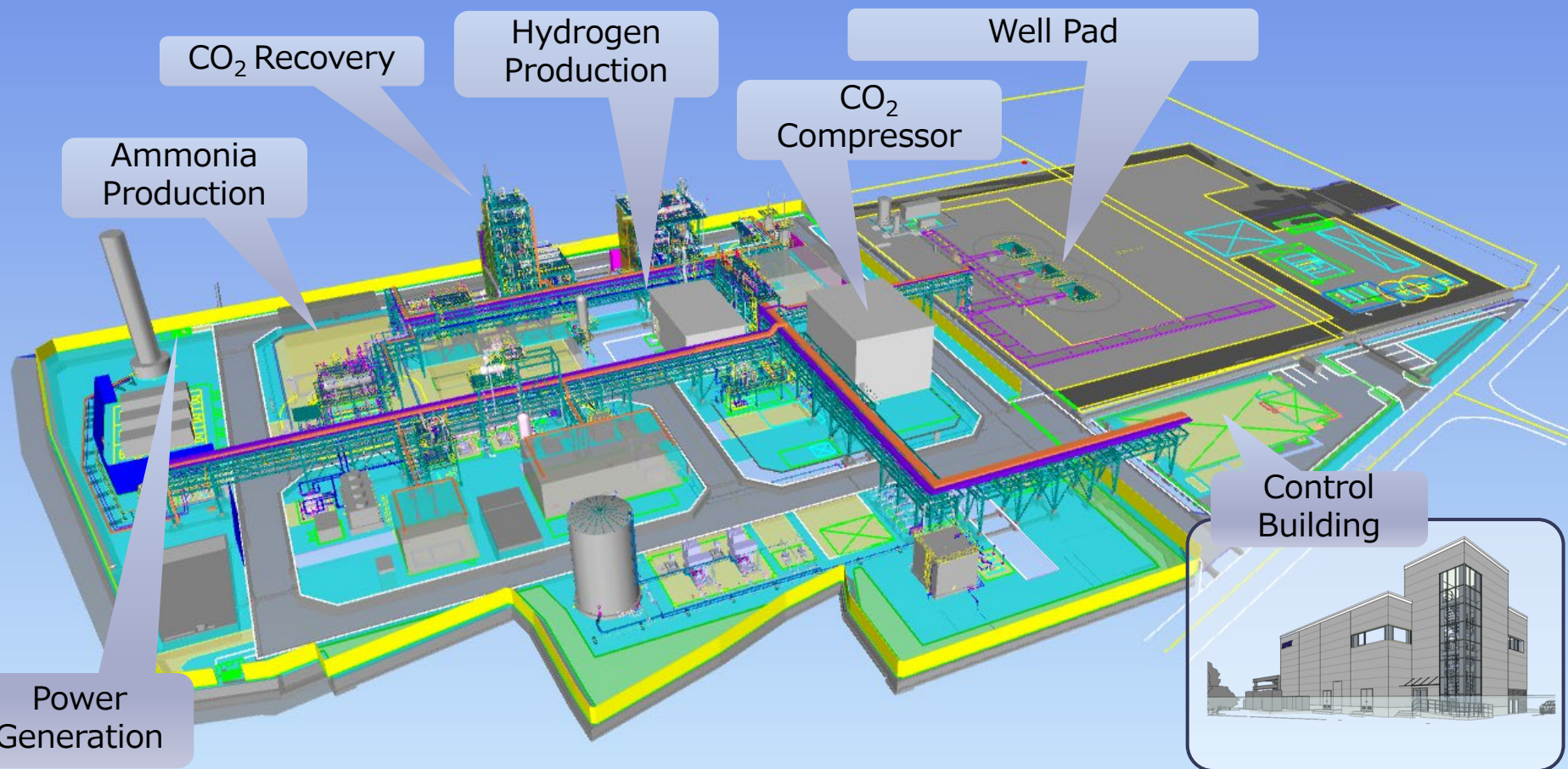
- > 1 The Ichthys LNG Project
- > 2 Prelude FLNG Project (WA-44-L)
- > 3 Bayu-Undan Project

Overview of the Project





3D Image of the Facilities



Status of the site (end of October)





Air Liquide

ATR (Autothermal Reforming) (Air Liquide)

- Limit CO₂ emission source to process gas (PCC is not required)
- Reducing energy for CO₂ Recovery



HiPACT (JGC/BASF)

- CO₂ Recovery with special amine which enables higher CO₂ recovery pressure
- Contributes to reducing compression energy for CO₂ injection to reservoir

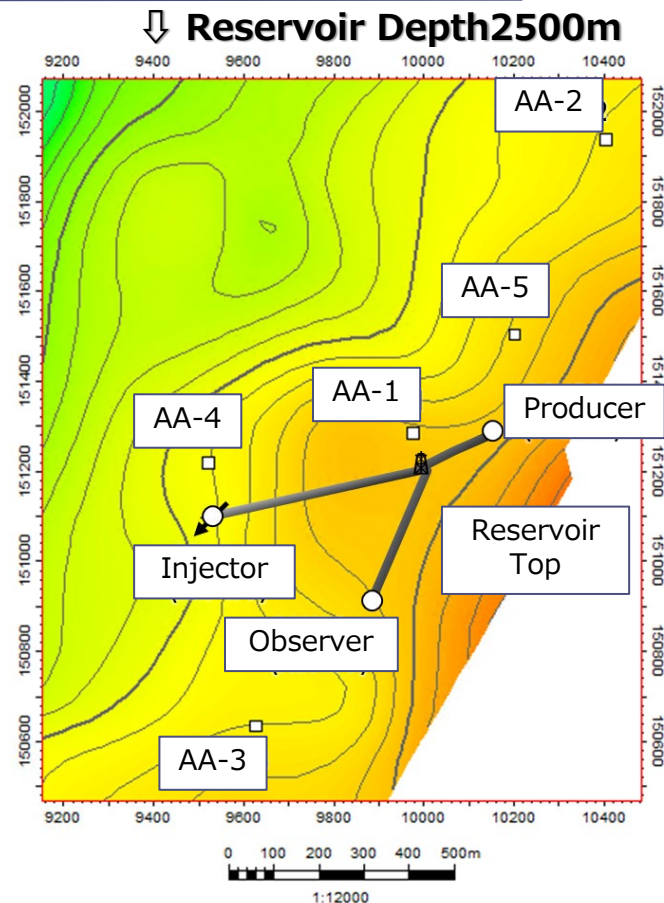
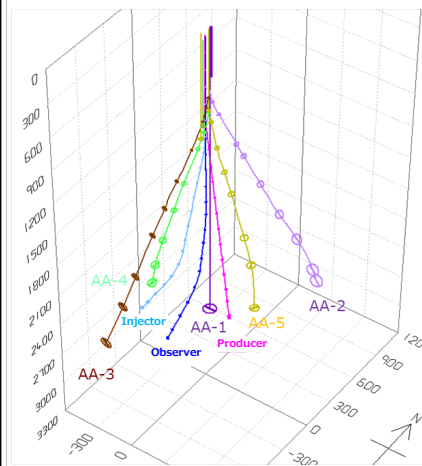
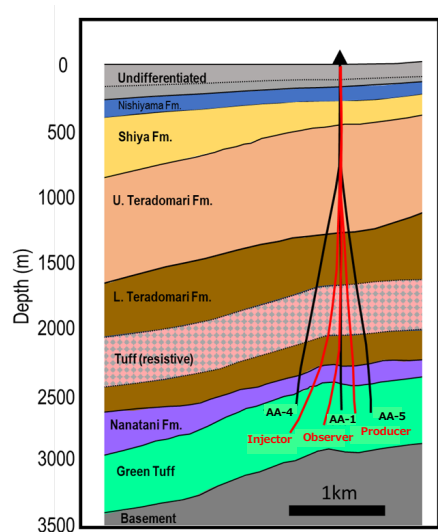


Newly developed ammonia production process (Tsubame BHB)

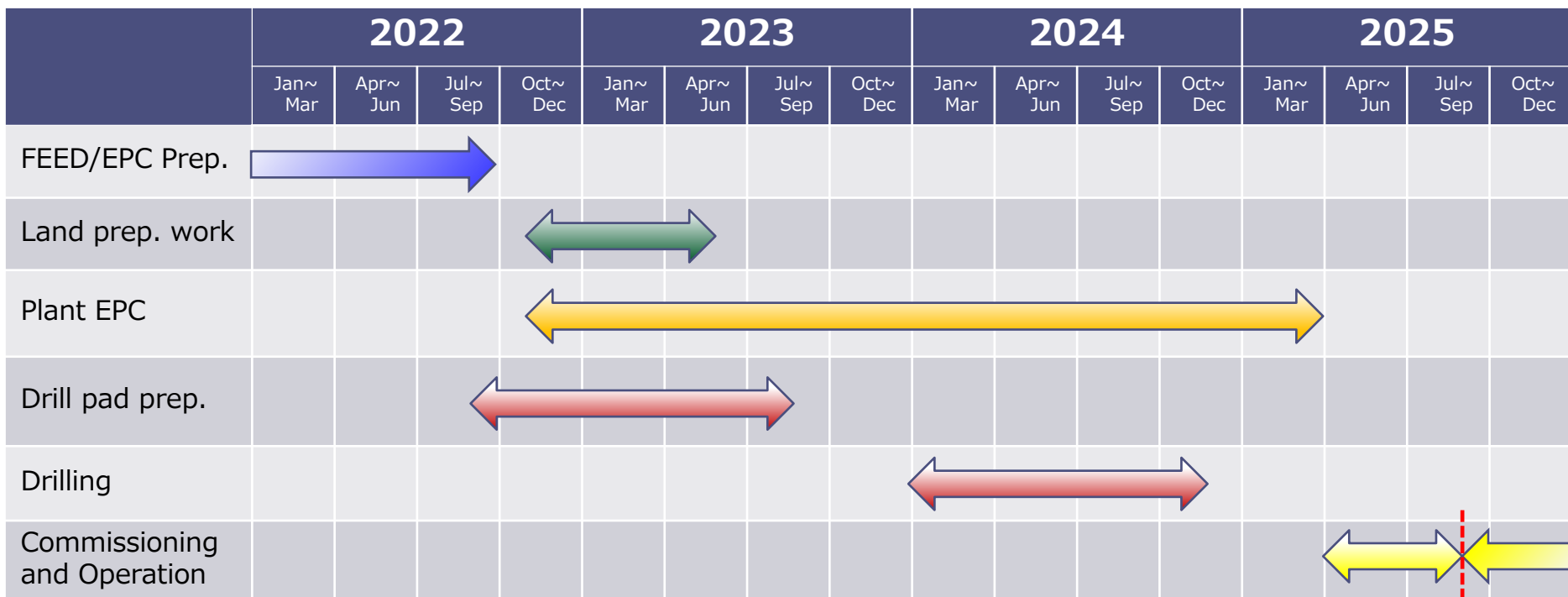
- New catalyst enables low pressure and temperature ammonia synthesis
- Contributes to reducing energy and improving process safety

Hirai Area of the Higashi Kashiwazaki Gas Field

- Period of production : 1970-2014
- Max prod rate : 500k Nm³/d @1974
- Cum prod : Gas 1.5B Nm³, Condensate 300k m³
- 5 Producers were drilled (1 has already been abandoned)



Project schedule



Dec. 2022 EPC started
 Mar. 2025 Start commissioning
 Aug. 2025 Start operation

Start operation

■ R&D financial support



Financial Support : NEDO

Facilities (H₂, NH₃ production, CO₂ recovery and compression scope) construction

Joint Research : JOGMEC

Subsurface scope e.g. well drilling, data acquisition, static/dynamic modeling

■ Plant EPC



JGC

Facilities such as feed gas pre-treatment, H₂ production, CO₂ recovery & compression, NH₃ storage and offloading, Power generation, Utilities, CO₂ injection line



DJK

NH₃ production facility

INPEX will obtain knowledges and experiences through integrated operations related to H₂/NH₃ production and CO₂ injection in this demonstration project, as well as high-efficiency blue ammonia production process technology. And INPEX will utilize these knowledges and experiences to produce clean energy (blue hydrogen, blue ammonia) which does not emit any CO₂ during use, and expand our clean business.

Until 2030

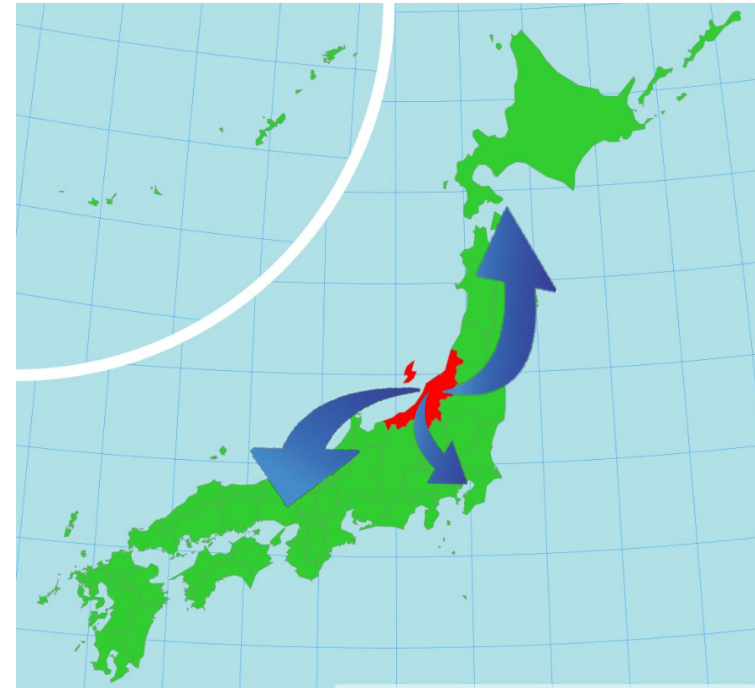
- Develop commercial Blue Hydrogen project with utilizing INPEX's gas fields and existing facilities.
- Participate in commercial Blue Ammonia project in overseas.

Until 2030

After2030

Continue to develop clean H₂/NH₃ and CCS/CCUS projects mainly in Japan and SE Asia/Oceania region.

Clean energy supply chain would be established in Niigata, and expanded it to all over the world.



*A New Wind
for Energy*



Thank you for your attention

INPEX