

IHI Group's ESG Management



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IHI Corporation

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1. IHI Group's ESG Management

Our Sustainability Vision

**“Create a World where
Nature and Technology Work in Unity”**

Materialize fulfilling lifestyles

**Resolve social
issues**

Become carbon-free

**Prevent and mitigate
disasters**

Uphold human rights

Build a diverse and inclusive workforce

Secure stakeholder trust

Management Philosophy

“Contribute to the development of society
through technology”

“Human resources are our single most
valuable asset”

IHI Group's ESG Management

We will help resolve social issues
through business to achieve a
sustainable, mutual growth for the
IHI Group and society.

2. Tackling Climate Change

Cut CO₂ emissions to achieve carbon neutrality

■ Through business operations

Cuts through production

- Adopt pioneering technologies
- Fuel conversion
- Use renewable energy

Cuts through procurement

- Partner with eco-friendly businesses

■ Through products and services

Cuts through existing technologies

Transition

- Enhance efficiency of existing facilities
- Lighten and electrify products
- Use renewable energy

Cuts through new technologies

Transformation

- Use hydrogen and ammonia
- Recycle carbon

IHI Carbon-Neutral 2050

Our 2050 Ambition for a Carbon-Neutral Value Chain

3. Transitioning to a Carbon-Neutral Economy

Carbon neutrality through products and services

Transition

Boost existing power plant efficiency

- Leading operations through advanced maintenance technology
- Biomass fuel conversion

Power management systems employing renewable energy

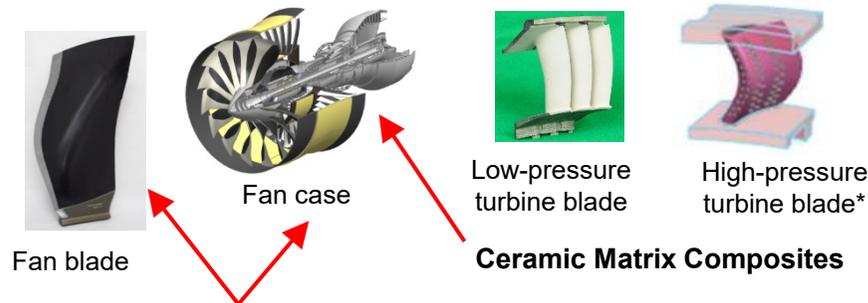
- Adjust supply and demand for renewable electricity employing storage batteries and energy management systems



Energy Storage Management System provided by IHI Terrasun Solutions Inc.

Lighten and enhance heat resistance of aviation parts

- Accelerate development of composite fan blades and ceramic matrix composites technology
- Participate from the conceptual design stage of next-generation engines



* IHI currently engaged in joint research for Japan Aerospace Exploration Agency's "En-Core Project", initiated in 2018 and running through 2023

Electric turbochargers



Mercedes-Benz AG GLC F-CELL electric turbocharger
Source: IHI Corporation



"ETC M" electric turbocharger for fuel cell systems

3. Transitioning to a Carbon-Neutral Economy

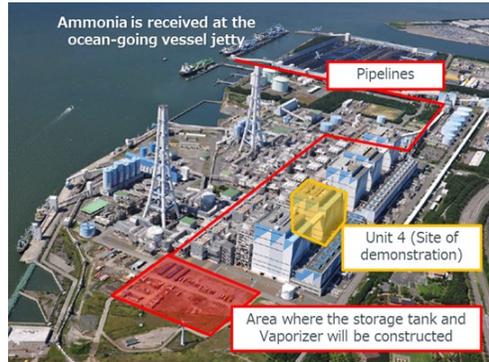


Carbon neutrality through products and services

Transformation

Co-firing ammonia in boilers and gas turbines

- Launch of ammonia co-firing demonstration project at large commercial power plant



Hekinan Thermal Power Station (Hekinan City, Aichi Prefecture), where the demonstration project will be conducted © JERA

From ammonia co-firing to ammonia exclusive firing

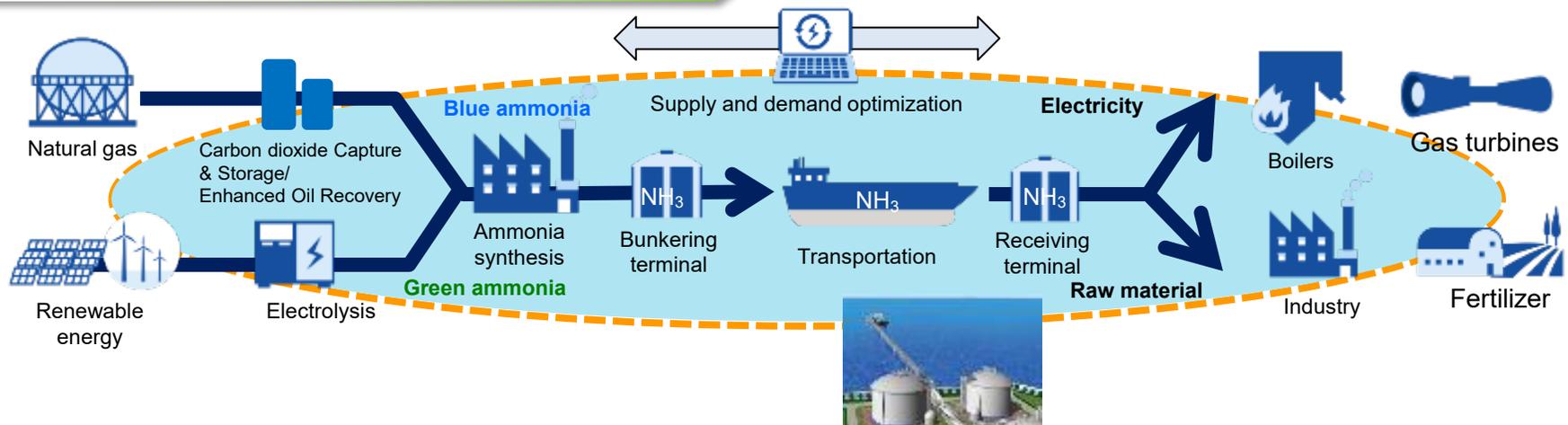
World's first

- Attained liquid ammonia co-firing ratio of 70% on calorific basis



Liquid ammonia and natural gas co-fired 2,000-kilowatt-class gas turbine at IHI's Yokohama Works

Ammonia value chain



3. Transitioning to a Carbon-Neutral Economy



Carbon neutrality through products and services

Transformation

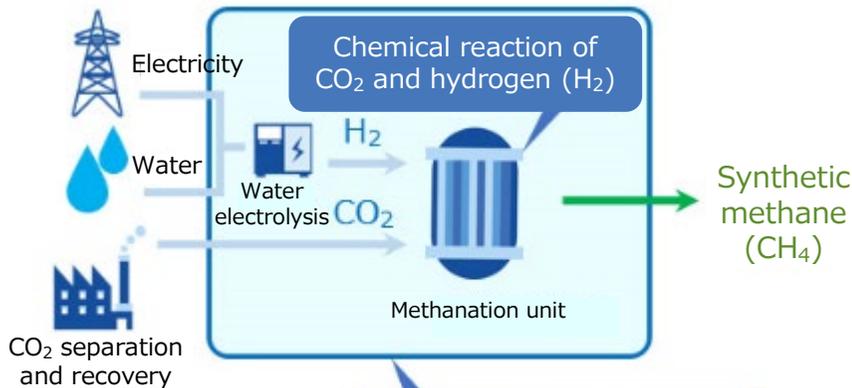
Carbon recycling

Methanation

- Delivery of first methanation unit to Asahi Group Research and Development Center



Methanation unit installed at facility of Asahi Quality and Innovations, Ltd.



Methanation synthesis flow and IHI's involvement

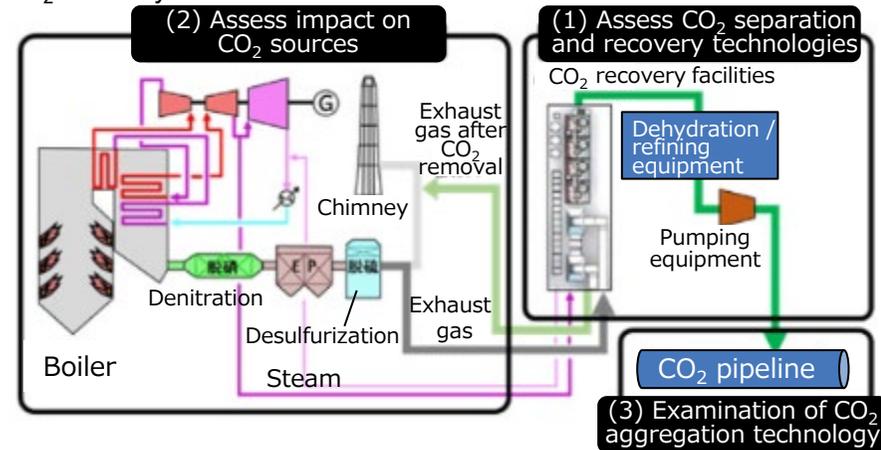


Fuel
Carbon capture and storage

CO₂
CO₂ recovery

CO₂ separation and recovery

- Commissioned to undertake research project for CO₂ separation and recovery at thermal power plants and for pipeline transportation



Overview of CO₂ separation and recovery survey

Direct air capture

- Capture of CO₂ directly from atmosphere

3. Transitioning to a Carbon-Neutral Economy

■ Carbon neutrality through products and services

Transformation

Tropical peatland*¹ consulting

- Aiming to commercialize tropical peatland consulting and high-quality carbon credits*² through a business alliance with Sumitomo Forestry
- Preventing peat fires, suppressing CO₂ emissions, and protecting forests by monitoring and predicting groundwater levels in tropical peatlands

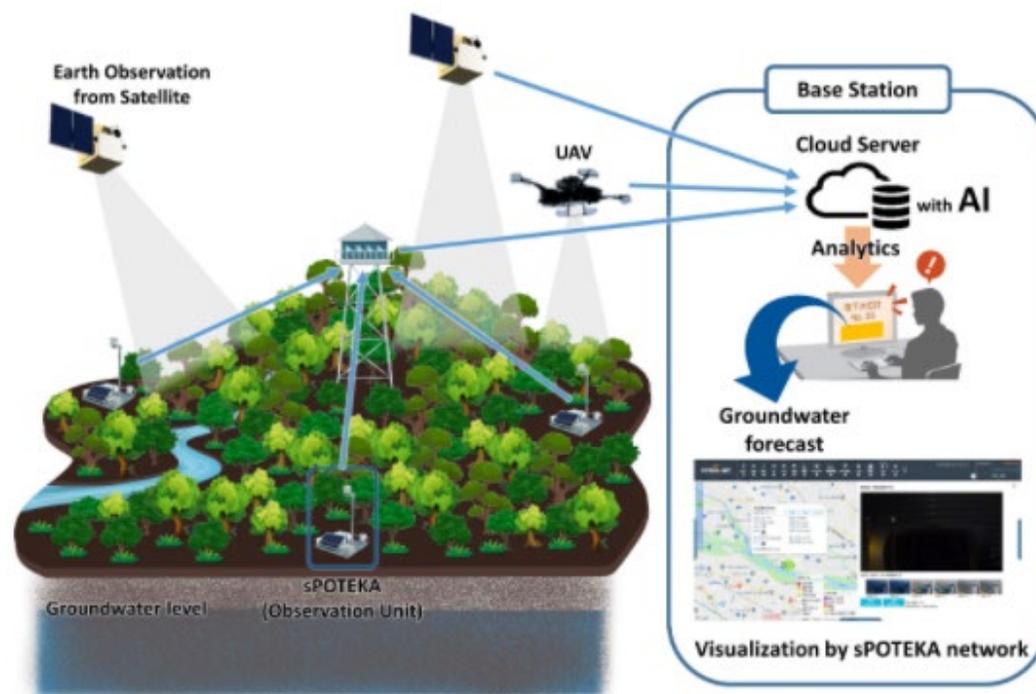


Image of system for predicting groundwater levels

*1 "Tropical peatland" refers to areas of land formed by the accumulation of plant remains that have not decomposed in water.

*2 "Carbon credits" refer to tradable certificates for greenhouse gases emissions reduction. When emissions are circulated between companies or countries, they are traded as credits.

4. Upholding Human Rights

The “IHI Group Human Rights Policy” was formulated to underpin our drive to help resolve social issues.

Key human rights challenges

- Eliminate forced labor
- Eliminate child labor
- Provide equal opportunities
- Eliminate discrimination and harassment
- Ensure safe and healthy workplaces for all employees
- Respect basic rights of all employees

Strengthen supply chain management

- Undertake socially responsible procurement by engaging with and monitoring suppliers

Establish structure to integrate human rights risk management globally

5. Building a Diverse and Inclusive Workforce

Material issue

- Acquire diverse and talented personnel
- Enhance employee motivation and engagement
- Integrate different values, experiences, and expertise

Create a conducive work environment

- Share aspirations through direct dialogue with senior management and other means
- Foster attribute, skill, and task diversity
 - Second jobs
 - In-house side job program
 - Smart Work (new work practices)



Results presentation
for in-house side job
program



In-house
side job



Direct dialogue with senior management

Strengthen globally applied frameworks and programs

**“Create a World where
Nature and Technology Work in Unity”**

IHI

Realize your dreams