

Medium-term Management Plan (FY2023-2025)

16 November 2022

Idemitsu Kosan Co.,Ltd.

Securities code: 5019

Truly inspired

How often do we consider the countries and communities we touch,
and how much empathy do we have for the people living there?

Are we contemplating what's best for them and then doing our utmost to act in their interests?

Each day, we must reflect on our actions;

we must strive to do better not only for ourselves, but also for others.

When we come together and our efforts are united, we make the impossible possible.

With integrity, solidarity, and determination, we will overcome any challenge we face.

The Origin of Management

人間尊重

Contents of the Medium-term Management Plan



Vision for 2050 and the Direction



Management Targets in 2030 and the Basic Policy



Medium-term Management Plan (FY2023-2025)

Shaping Change

We will fulfill our

Responsibility to support people and their daily lives

Responsibility to protect the global environment now and in the future

through the implementation of:

- Energy one step ahead
- Diverse resource conservation / circulation solutions
- Smart Yorozyua*

*Smart Yorozyua: Smart one-stop shop

Our Business Environment Prediction for 2050

Energy system based on CN* society

- Power generation: hydrogen / ammonia mono fuel combustion, fossil fuel with CCS, renewable energy
- Transport: electrification, synthetic fuel, second-gen biofuel (non-edible sources)
- Industry: electrification, hydrogen reduction in ironmaking, etc.

Entrenched circulatory society

- Biomass-derived materials
- Recycled plastic
- Collection and recycling of rare metals (lithium batteries, solar panels, etc.)

Discontinuous technological innovation

- Negative emissions technology
- CCUS using CO2 as a resource
- Next-gen storage batteries
- Fully autonomous vehicles



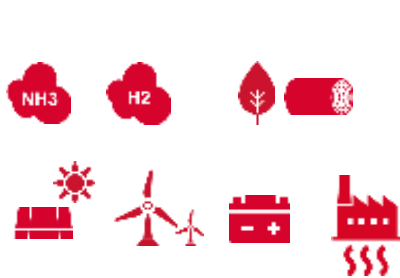
Business transformation opportunities for Idemitsu

The realization of a CN and recycling-oriented society will require an organization that combines **discontinuous technological innovation** with **digital technology** and **implements them as systems in society**.

* Carbon neutrality: hereinafter called "CN"

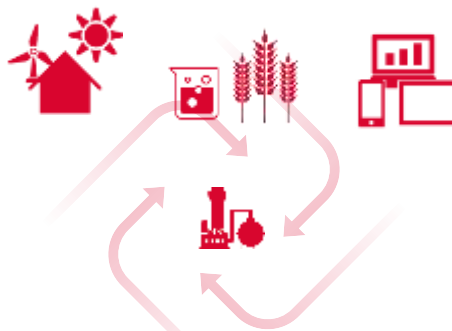
3 Business Domains towards Evolution of the Business Portfolio

Pursue an evolution of our business portfolio through social implementation in the “3 business domains”



Energy one step ahead

Steady supply of diverse, eco-friendly CN energy



Diverse resource conservation / circulation solutions

CN solutions for industrial activities and regular consumers



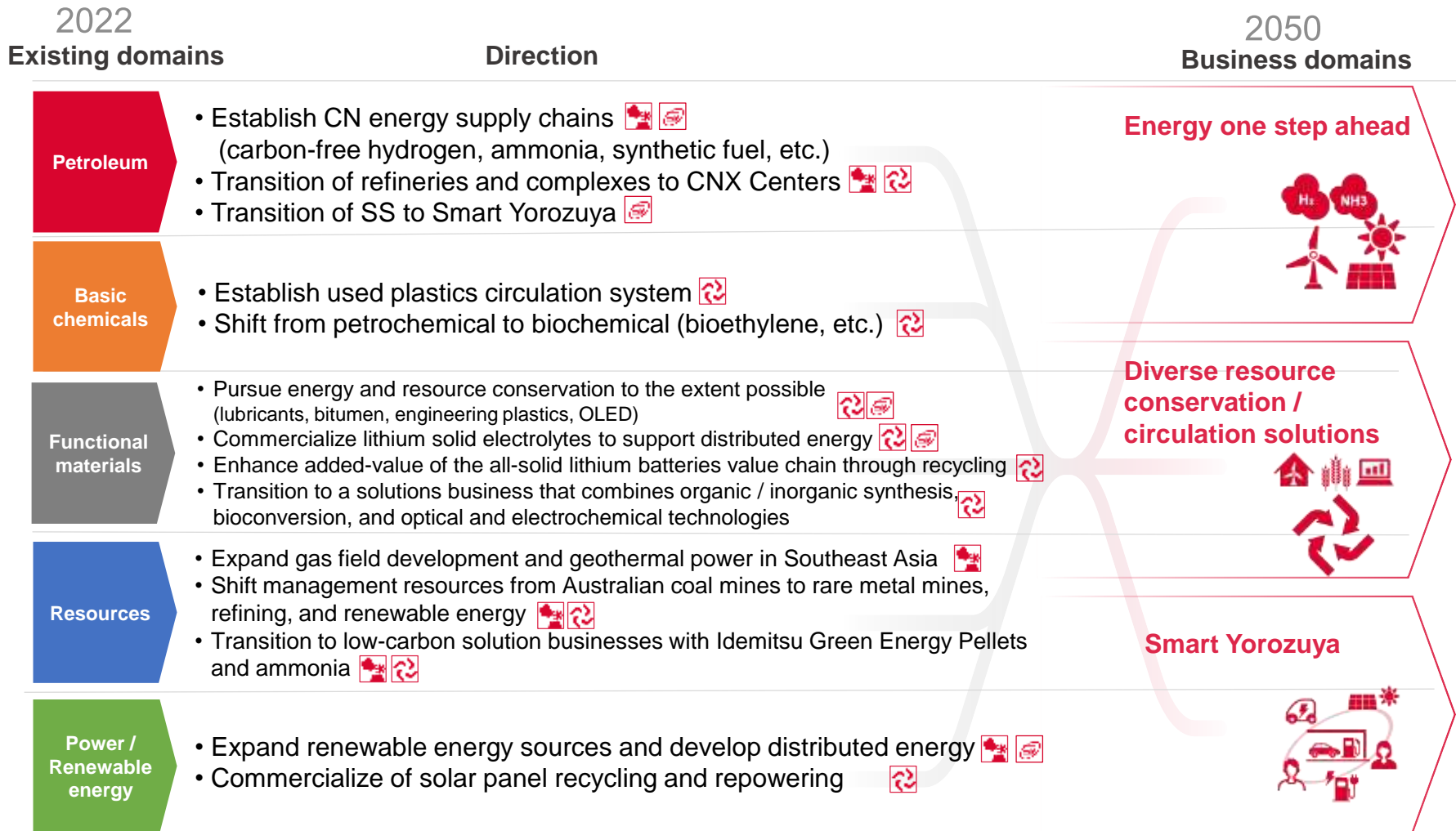
Smart Yorozuya

Diverse energy and mobility centers that support regional lifestyles

By transforming the existing systems, we will fulfill **our responsibility to support people and their daily lives** and **to protect the global environment now and in the future**

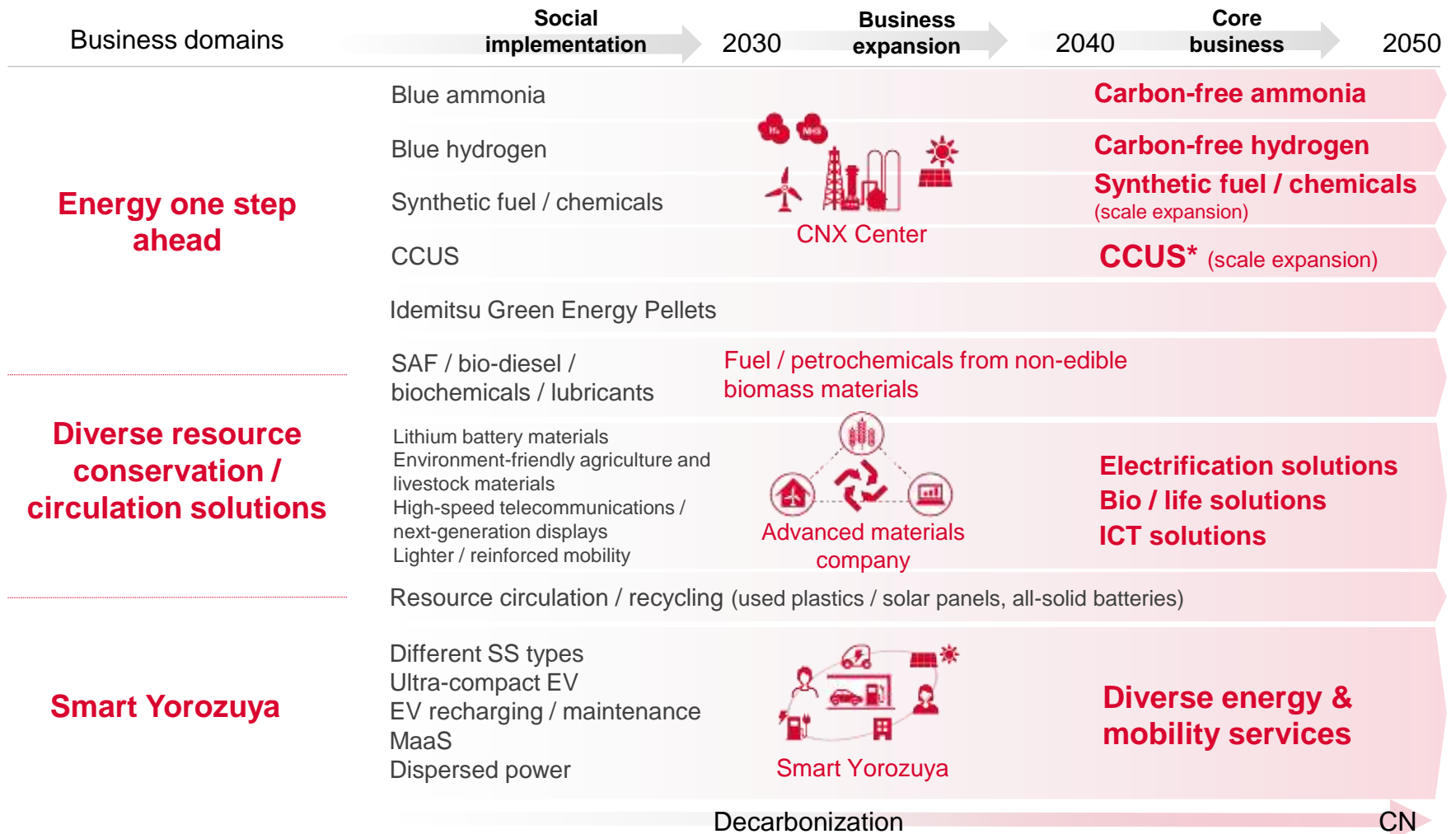
Direction of Existing Businesses

Shift to domains offering CN solutions combining diverse products and services



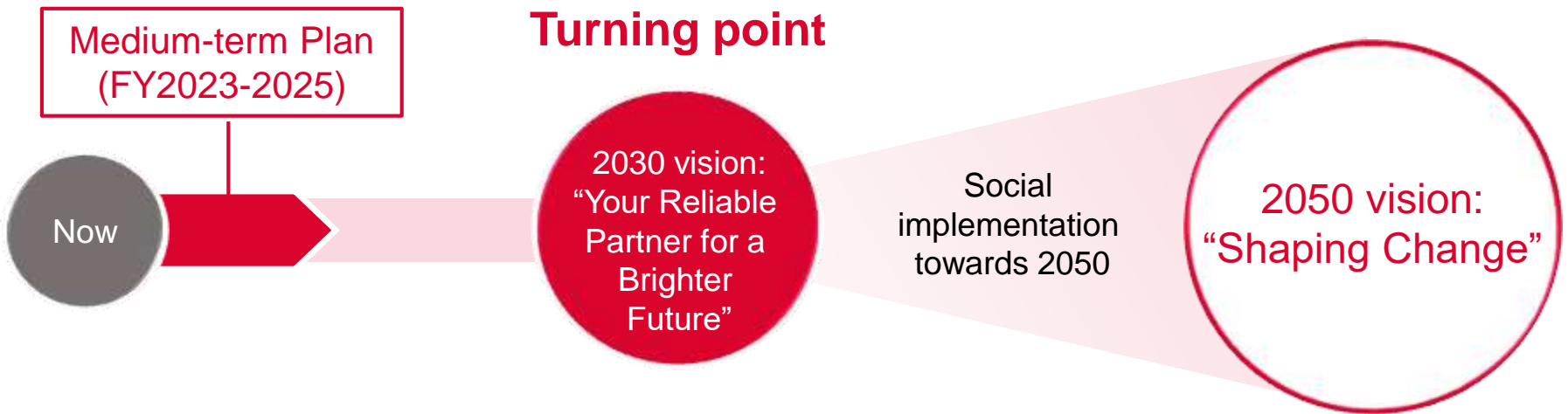
Themes for implementation in 3 domains of society

We will implement solutions in 3 domains of society by 2030 to become a **main player in energy and CN solutions** in the CN / circulatory society by 2050



Importance of 2030

- While discontinuous technological innovation is essential to achieving CN in 2050, continuous supply of energy and materials is needed.
- Amid uncertainties such as technological trends, we must accumulate knowledge and skills ahead of 2050 and start systematically doing so now.
- 2030 will be a turning point to partially realize the 2050 CN transition while still providing steady supplies of energy and materials.



Contents of the Medium-term Management Plan



Vision for 2050 and the Direction



Management Targets in 2030 and the Basic Policy



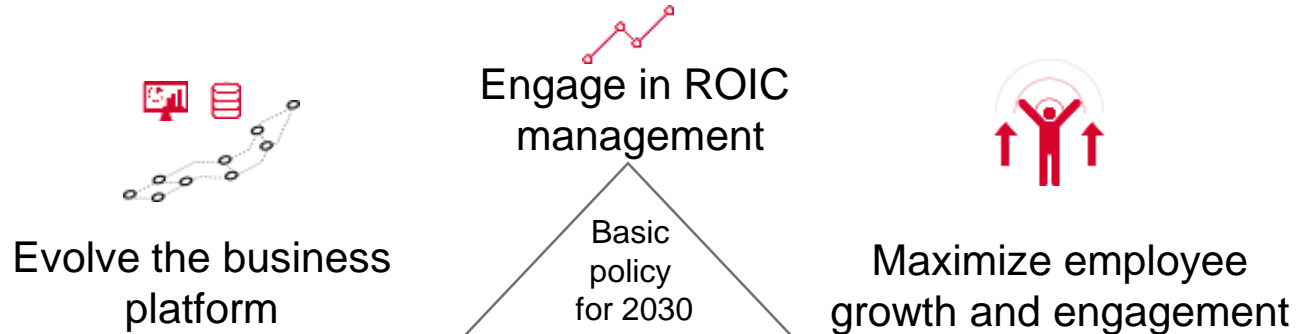
Medium-term Management Plan
(FY2023-2025)

FY2030 Management Targets

2030
Vision

“Your Reliable Partner for a Brighter Future”

Contribute to the achievement of a CN society
while fulfilling our responsibility to provide a stable energy supply



Financial Targets

Operating + Equity Income
(excluding inventory impact)

¥270 billion

ROE

10%

Fossil fuel business
profit contribution*1

≤50%

ROIC

7%

Non-financial Targets

GHG Reduction

CO2 reduction (Scope1+2)
vs. 2013

-46%

Human Capital Investments

Idemitsu Engagement
Index*2

≥80%

D&I

Female
recruiting ratio

≥50%

Female ratio in
key positions

≥10%

Male ratio taking
childcare leave

100%

Investments in
education per
employee

≥¥100,000
(top class in Japan)

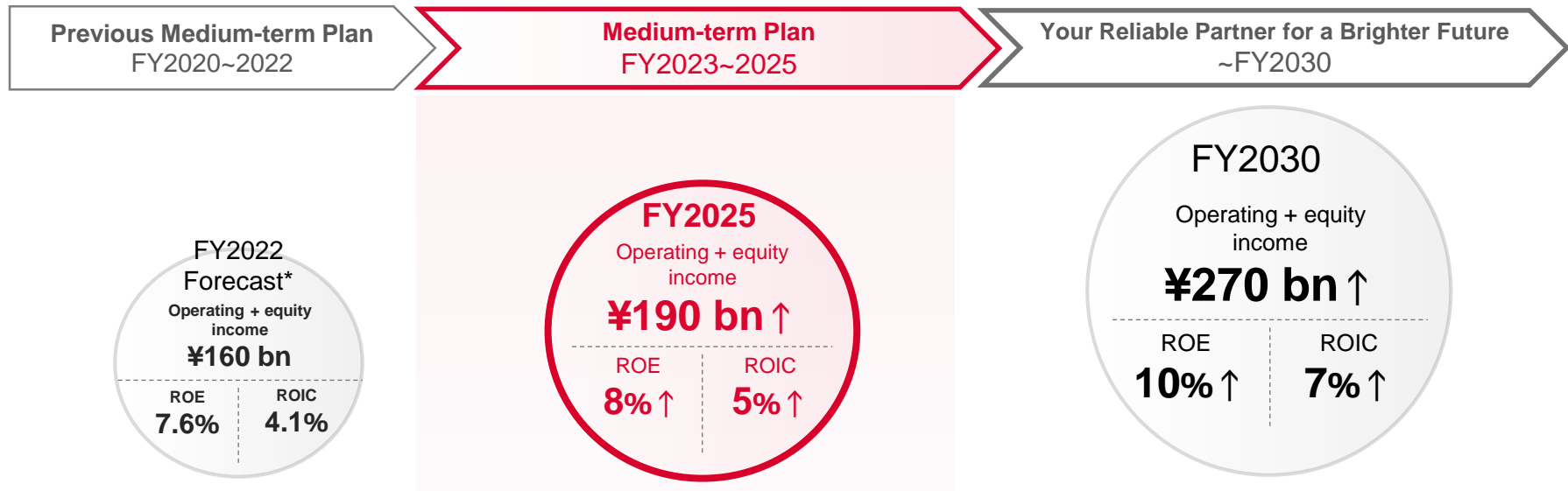
*1 Fossil fuel business profit contribution = percentage of company-wide profits from the petroleum and

resources businesses (operating + equity income) [excluding inventory impact]

*2 Indicator to monitor the commitment level of the employee towards the organization

Positioning of the Medium-term Management Plan

We position this medium-term management plan as the **execution plan for the 2030 vision “Your Reliable Partner for a Brighter Future”**, promoting the transition of our business portfolio



- Strengthen the management foundation by maximizing integration synergies
- Strengthen competitiveness of existing businesses
- Strategic moves towards expansion of new businesses

● Maximize earnings from existing businesses

Enhance capital efficiency through structural reforms

● Create new earnings

Decision-making for 2030 implementation themes

Rapid implementation and monetize

Preparations for structural reform investments and implementation

Preparations for business scale expansion

* 2022 forecast is an adjusted figure which applies market assumptions for coal prices, etc. to the current medium-term management plan

Basic Policies for 2030

We will maintain the basic policies for 2030 stated in the current medium-term plan while investing in business structure reforms and in human capital to evolve the business portfolio

2030
Vision

“Your Reliable Partner for a Brighter Future”

Transition from a
Business Portfolio
Focused on Fossil Fuels

1



Investments in Business
Structure Reforms

Engage in ROIC Management

- Enhance capital efficiency in existing businesses and expand new businesses that contribute to CN
- Strengthen initiatives in the 3 business domains

2



Investments in Human Capital

Maximize Employee Growth and Engagement

- Set the HR strategy at the core of the management strategy and manage the progress by KPIs
- Nurture personnel to achieve business structure reforms

Value provided:
Social
implementation

3



Evolve the Business Platform

DX strategy: Enhance productivity with digitalization and create new value
Evolution of governance: Strengthen board functions and renew the executive and director compensation for closer linkage to management strategy

Basic Policies for 2030

2030
Vision

“Your Reliable Partner for a Brighter Future”

Transition from a
Business Portfolio
Focused on Fossil Fuels

1



Investments in Business
Structure Reforms

Engage in ROIC Management

- Enhance capital efficiency in existing businesses and expand new businesses that contribute to CN
- Strengthen initiatives in the 3 business domains

2



Investments in Human Capital

Maximize Employee Growth and Engagement

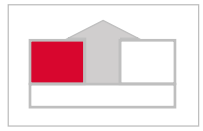
- Set the HR strategy at the core of the management strategy and manage the progress by KPIs
- Nurture personnel to achieve business structure reforms

Value provided:
**Social
implementation**

3



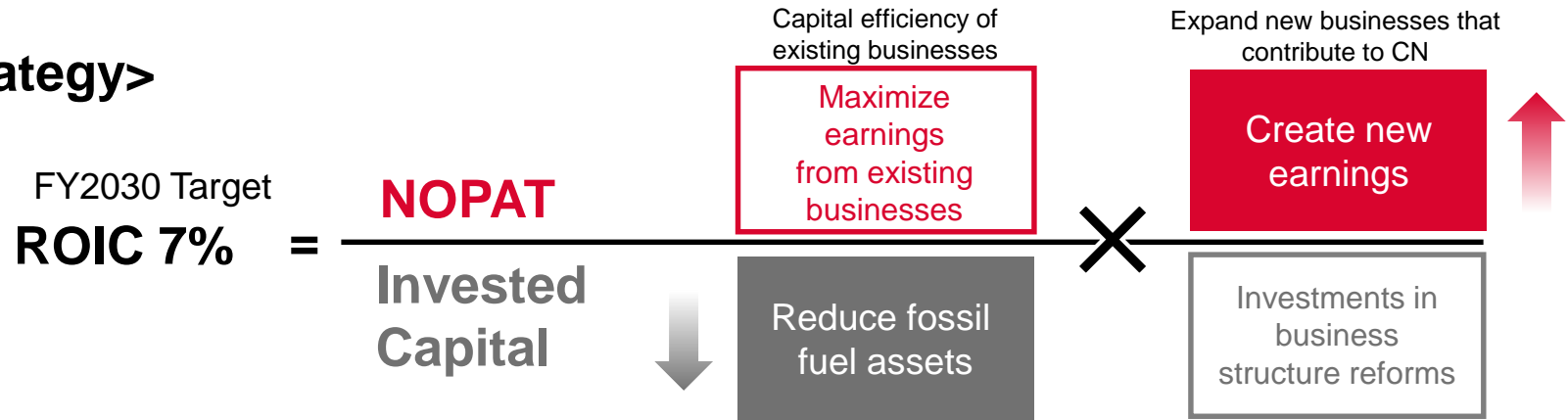
DX strategy: Enhance productivity with digitalization and create new value
Evolution of governance: Strengthen board functions and renew the executive and director compensation system for closer linkage to management strategy



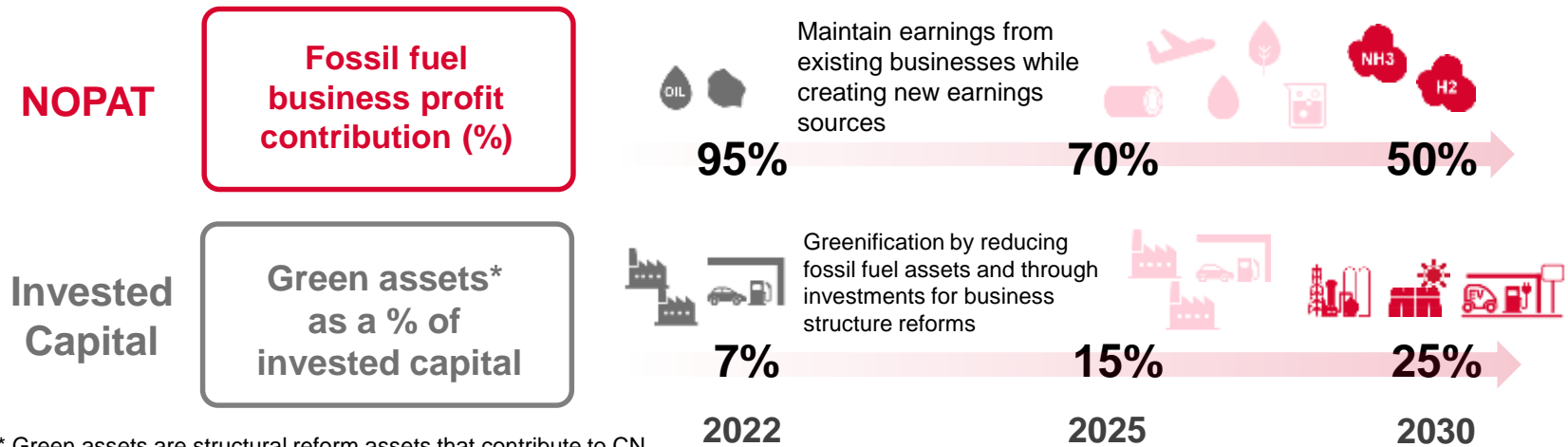
Transition of the Business Portfolio through the ROIC Management

Aim for **7% ROIC** by enhancing capital efficiency while revamping the business portfolio

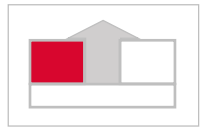
<Strategy>



<KPIs>



* Green assets are structural reform assets that contribute to CN



Capital Efficiency of Existing Businesses

Previous Medium-term Plan
FY2020~2022

Medium-term Plan
FY2023~2025

Your Reliable Partner for a Brighter Future
~FY2030

20% decrease in domestic petroleum demand (2022→2030)

NOPAT Maintain earnings through cost reductions and streamlining (maximize profits)

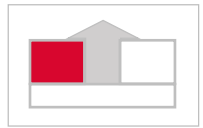
- Reduce costs / streamline in line with declines in domestic demand
- Expand earnings in existing domains through M&A, etc.
- Enhance productivity through increased use of DX

Invested Capital

Reduce fossil fuel assets by 20% by 2030*

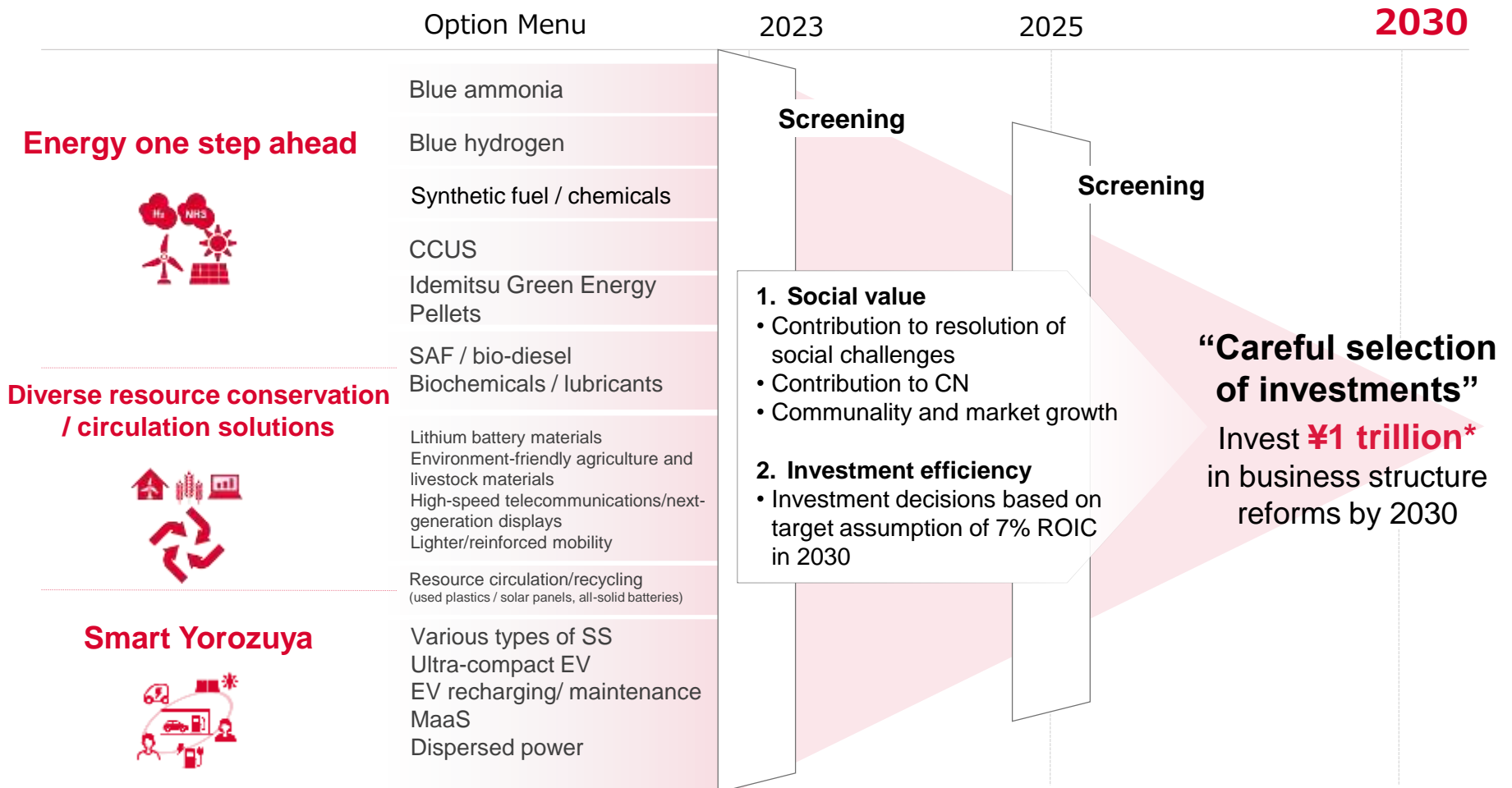
- Review supply structure in line with declines in domestic demand
 - Achieve 300,000 BD reduction by 2030
 - Maintain 90% peak capacity utilization despite reduced domestic demand
- Structurally reform existing businesses
 - Reduce production size at coal mines, sort out non-operating and inefficient assets

Enhancing capital efficiency of existing businesses

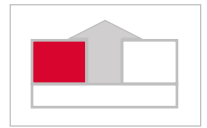


Candidates for “New Business Themes that Contribute to CN”

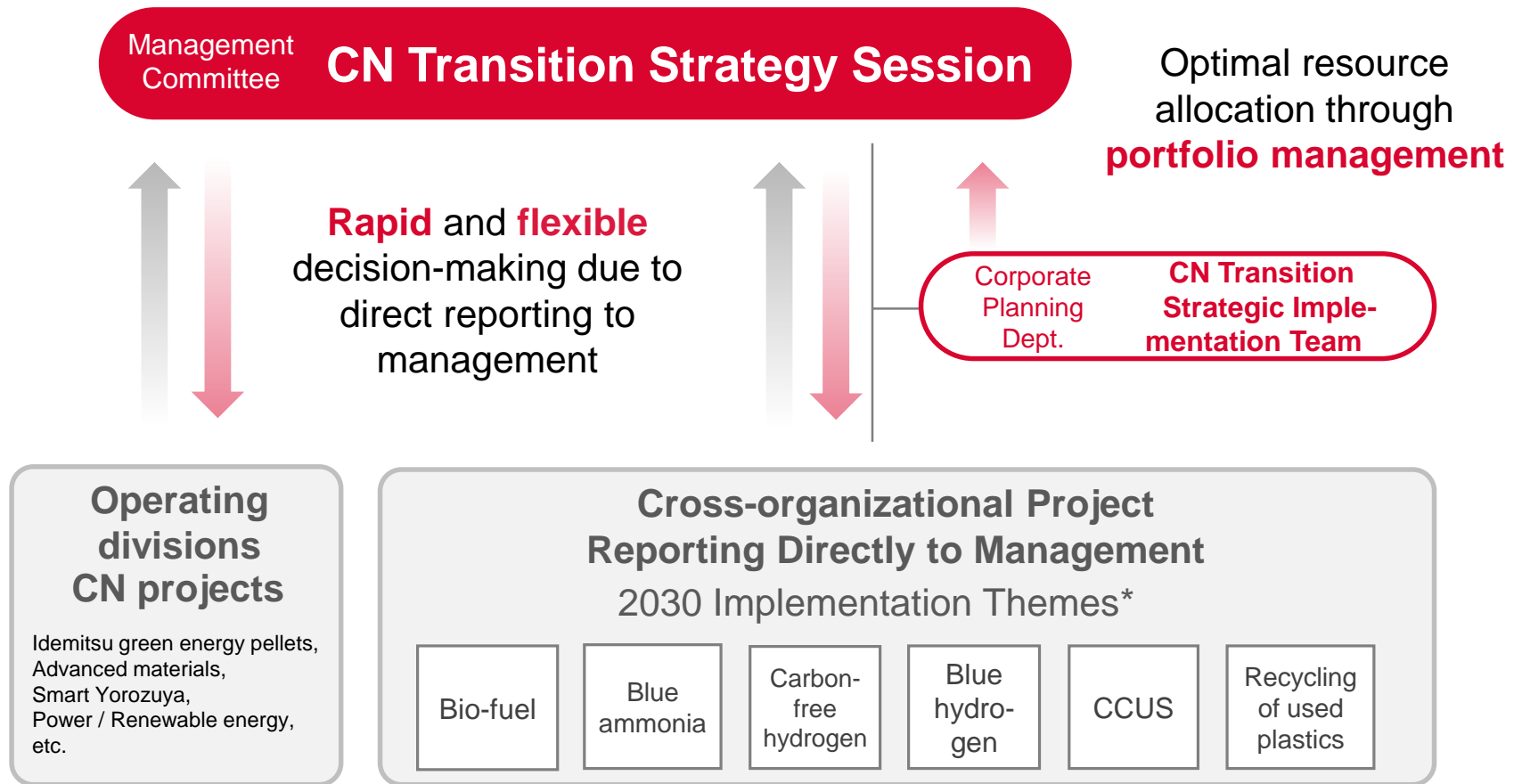
- Most investment decisions will be made during this medium-term plan period (FY2023-2025)
- Consider a broad universe of alternatives and carefully select investments towards 2050



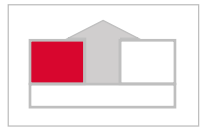
Management Framework towards the Transition to CN



Pursue rapid implementation based on a management structure reporting directly to the management team



*Themes will be reviewed based on changes in the external environment, progress of discussions, etc.

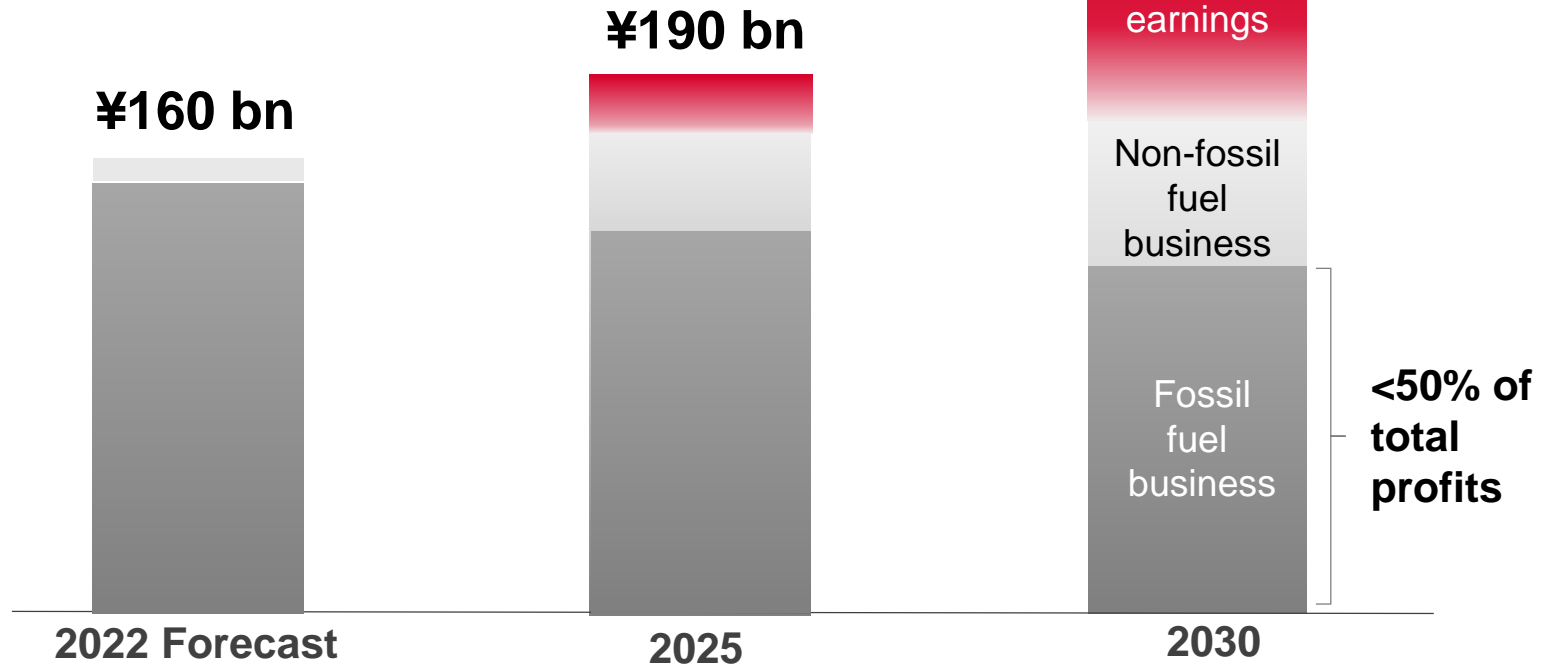


Transition of the Business Portfolio through Creation of New Earnings

We aim to achieve a transition in the business portfolio by creating new earnings through investments in business structure reforms while continuing to enhance profitability and capital efficiency in existing businesses

Operating + equity income

¥270 bn



Investments in business structure reforms

¥290 bn

¥710 bn

← **Cumulative total of ¥1 trillion by 2030** →

Basic Policies for 2030

2030
Vision

“Your Reliable Partner for a Brighter Future”

Transition from a
Business Portfolio
Focused on Fossil Fuels

1 Investments in Business Structure Reforms

Engage in ROIC Management

- Enhance capital efficiency in existing businesses and expand new businesses that contribute to CN
- Strengthen initiatives in the 3 business domains

Value provided:
**Social
implementation**

2 Investments in Human Capital

Maximize Employee Growth and Engagement

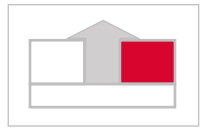
- Set the HR strategy at the core of the management strategy and manage the progress by KPIs
- Nurture personnel to achieve business structure reforms

3



DX strategy: Enhance productivity with digitalization and create new value

Evolution of governance: Strengthen board functions and renew the executive and director compensation for closer linkage to management strategy

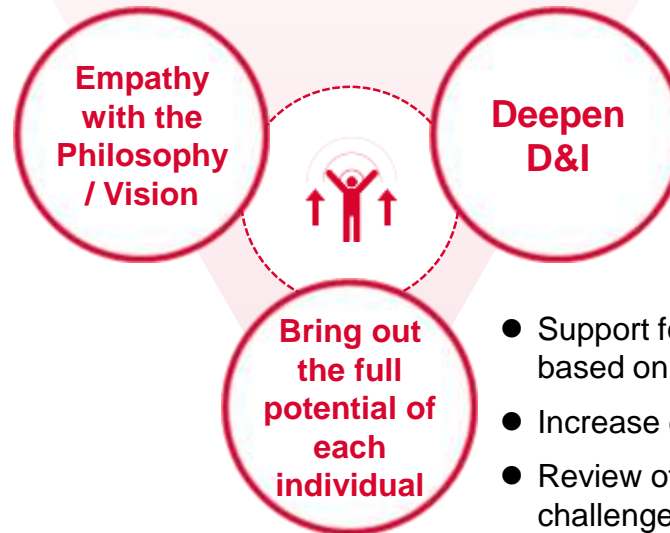


2050 Vision “Shaping Change”

A strong and flexible team that can shape the future, no matter what the future has in store

Organizational and Personal Growth

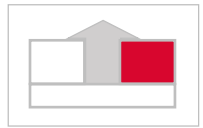
- Enrich direct communications between the management and employees
- Accelerate discussions relating to the medium-term management plan at the working level
- Timely sharing of management information



- Women in key roles, understanding towards LGBTQ (Ally), recruiting of the physically challenged
- Promote national employees
- Promote recruiting experienced personnel
- Support for re-skilling and self-career options based on the personal strengths and life stages
- Increase education investments per employee
- Review of the human resources system to support challenges




Management Philosophy: Truly inspired

The Origin of Management: 人間尊重



KPIs for the Human Capital Strategy

- Establish KPIs as a part of the management strategy and manage progress
- Reflect in the officers' compensation

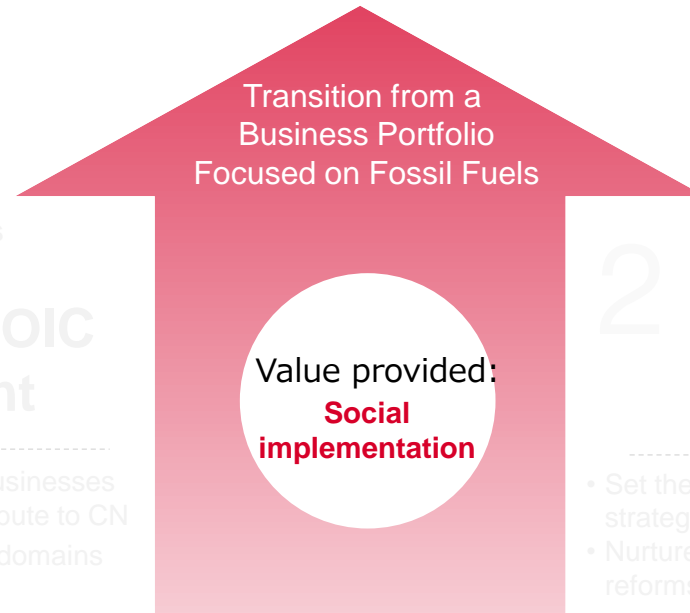
KPIs	As of 2022	2030 Target	
Idemitsu Engagement Index*	67%	➔ ≥80%	
D&I	Female recruiting ratio	23% ➔ ≥50%	
	Female ratio in management-level positions	3% ➔ ≥10%	
	Male ratio taking childcare leave	56% ➔ 100%	
Investments in education per employee	¥43,000	➔ ≥¥100,000 (top class in Japan)	 DX

*Quantifying the understanding of the corporate mission, support for corporate strategy and targets, understanding of one's own roles within the organization, visible personal growth, etc. every year and managing targets as an index

Basic Policies for 2030

2030
Vision

“Your Reliable Partner for a Brighter Future”



1  Investments in Business Structure Reforms
Engage in ROIC management

- Enhance capital efficiency in existing businesses and expand new businesses that contribute to CN
- Strengthen initiatives in the 3 business domains

2  Investments in Human Capital
Maximize Employee Growth and Engagement

- Set the HR strategy at the core of the management strategy and manage the progress by KPIs
- Nurture personnel to achieve business structure reforms

3



Evolve the Business Platform

- DX strategy:** Enhance productivity with digitalization and create new value
- Evolution of governance:** Strengthen board functions and renew the executive and director compensation system for closer linkage to management strategy

DX Strategy



Create New Value

Promote use of data to accelerate development and social implementation of next-generation energy, resource circulation solutions, and smart one-stop shops

Customers

Individual and corporate customers



Products

OMO*

Services

Provide value to customers across all products and services

Co-creation with partners to enhance efficiency and to create value

Data coordination

Partners

Business partners, alliance partners, external institutions, etc.



Cross-marketing

Foundation for data analysis

Simple & composable



DB

Analytic tools



Continuous, data-driven process reforms

Nurture personnel who support DX



Security

Idemitsu

Enhance productivity by 30%

Simplify/automate business processes to secure free cash and time for personnel to create new value by implementing DX

Evolution of Governance



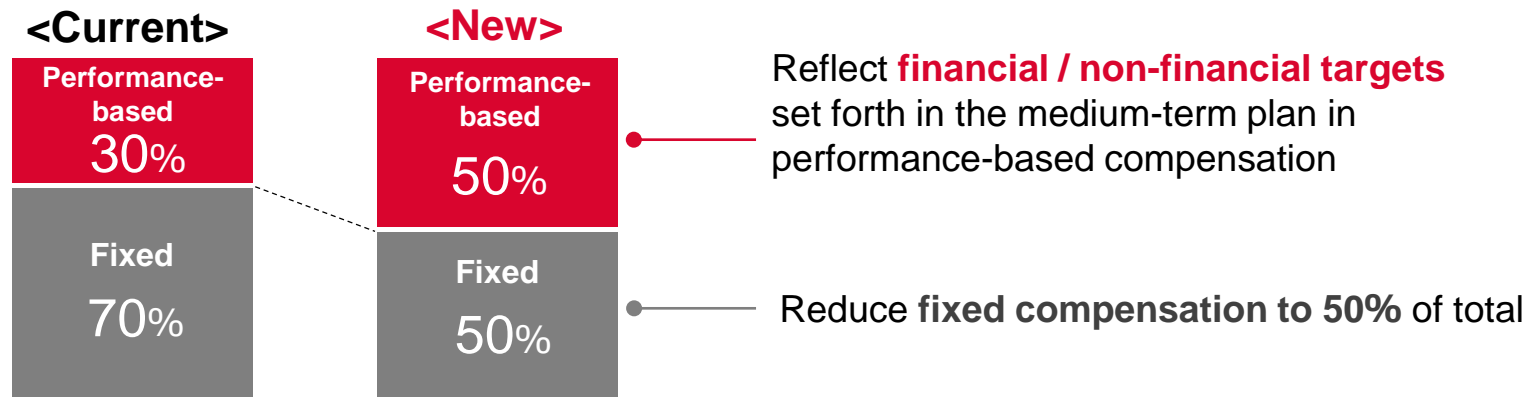
Strengthen board functions

- **Skills matrix**
Review skills sets and appointment of members based on medium-to-long-term management challenges
- **Succession plan**
Implement long-term succession plans to select and nurture future leaders
- **Effective board operations**
Focus on discussions aimed at enterprise value creation, including management strategy and governance



Renew the executive and director compensation

Currently in planning of the increase in performance-based pay ratio which leads to more focus on mid-to long term enterprise value creation and shareholder returns (to be implemented from FY2023*)



Contents of the Medium-term Management Plan



Vision for 2050 and the Direction



Management Targets in 2030 and the Basic Policy



**Medium-term Management Plan
(FY2023-2025)**

Progress in Business Structure Reforms in the Current Medium-term Plan

- **Steady progress towards the 2030 vision “Your Reliable Partner for a Brighter Future”** by achieving profit targets in the revised medium-term plan and improvement in financial position following maximization of integration synergies and countermeasures for the decrease in domestic petroleum demand
- **Further acceleration in the business portfolio transition** through **enhancing capital efficiency in existing businesses and expanding new businesses that contribute to CN**

Theme	Major initiatives
Response to reduced domestic petroleum demand	<ul style="list-style-type: none"> ● Completed integration: ¥60 bn in synergies, Completed the unification of the brands and major systems ● Reorganization of refineries: Seibu (decision to terminate refinery operations), Toa (acquired to become a 100% subsidiary)
Business restructuring	<ul style="list-style-type: none"> ● Sale of N. American gas and Canadian uranium businesses ● Functional chemicals business (withdrawal from acrylic acid business), Solar Frontier (withdrawal from panel production) ● Agri-bio business (100% acquisition of SDS Biotech)
Asset sales	<ul style="list-style-type: none"> ● Sale of idle assets and cross shareholdings: created ¥60+ bn cash
Early efforts towards CN	<ul style="list-style-type: none"> ● CNX centers: Shunan Ammonia, SAF, Tokuyama Biomass ● Resources: Shift from oil to natural gas development ● Idemitsu Green Energy Pellets: Commenced construction of commercial production plant in Vietnam ● Lithium battery materials: Small validation tests (FY2021 3Q~)

3 business domains



FY2025 Management Plan

Financial Targets

Profits (excluding inventory impact)

Net income

¥135 bn

Operating + equity income

¥190 bn

Capital Efficiency

ROE

8%

ROIC

5%

Business Portfolio Transition

Fossil fuels business
profit contribution

≤70%

Non-financial Targets

Investments in Human Capital

Idemitsu Engagement Index

≥75%

D&I

Female recruiting
ratio*1

≥50%

*1As of 4/2026

Female ratio in
key positions*2

≥5%

*2As of 7/2026

Males taking childcare
leave*3

≥80%

*3As of 3/2026

Education investments
per employee

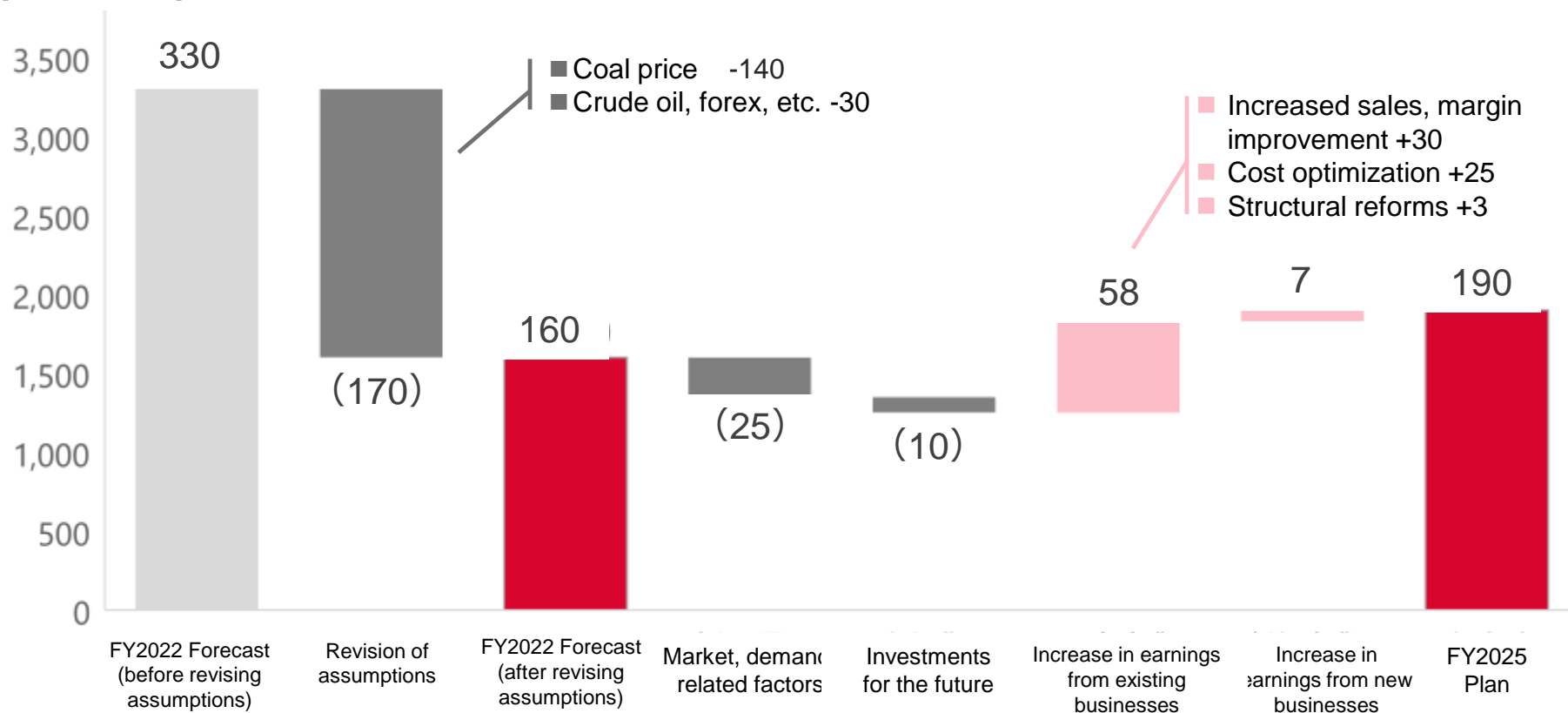
≥¥100,000

(top class in Japan)

Operating + Equity Income excluding Inventory Impact (1) (FY2022 forecast v. FY2025 plan)

- Revised assumptions for FY2022 forecasts, which serve as the starting point for the plan: ¥160 billion
- Aiming to achieve ¥190 billion in FY2025 amid decreasing domestic petroleum demand by implementing structural reforms and improving earnings from existing businesses (+¥30 billion vs. FY2022 after revising assumptions)

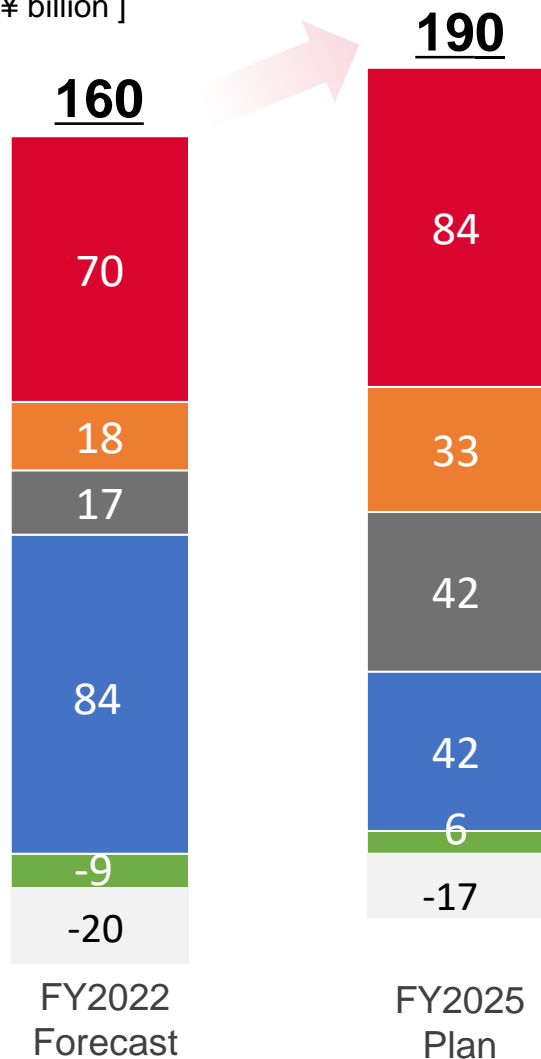
[Unit: ¥ billion]



* Revision of assumptions: Revised major assumptions in FY22 forecasts to assumptions for FY23

Operating + Equity Income excluding Inventory Impact (2) (FY2022 forecast v. FY2025 plan)

[Unit: ¥ billion]



(after revising assumptions)

Reasons for change vs FY2022

Petroleum +14	<ul style="list-style-type: none"> ● Decrease in domestic fuel demand ● Cost optimization prior to the reduced demand ● Overseas sales expansion
Basic chemicals +15	<ul style="list-style-type: none"> ● Recovery in the aroma market ● Reduction in maintenance and renewal investments ● Earnings contribution from Chita Office
Functional materials +25	<ul style="list-style-type: none"> ● Lubricants: Sales expansion of IBMO, etc. ● Functional chemicals: Business structure reforms ● Electronic materials: Increase in sales due to development of new materials, etc.
Resources -42	<ul style="list-style-type: none"> ● Resources: Stable operations at gas fields in Vietnam ● Coal: Decrease in production volume, market decline
Power / Renewable energy +15	<ul style="list-style-type: none"> ● Power: Sales adjusted to scale of power generation ● SF: Transition to an Sler
Others +3	<ul style="list-style-type: none"> ● Reduction of corporate costs

Investment Plan (3 years)

Total investment: ¥690 billion

Business structure reforms

New businesses: ¥290 bn

Cumulative **¥1 trillion** investment by 2030

Energy one step ahead
190 bn

- Chiba SAF manufacturing equipment (100,000 KL)
- Establish Tokuyama ammonia base
- Expand Idemitsu green energy pellets

Diverse resource conservation /
circulation solutions
80 bn

- Expand lithium solid electrolytes
- Recycle used plastics
- M&A in key domains (electrification, bio / life, ICT)

Smart
Yorozuya
20 bn

- Manufacture ultra-compact EV
- EV charging

Existing businesses

Strengthening the business foundation: ¥130 bn

Petroleum

- Develop SS
- Strengthen overseas trading

Basic
chem-
icals

**Functional
materials**

- M&A in existing domains

Resources

- Develop acquired mines

**Power / Renew-
able energy**

- Develop renewable energy sources

Maintenance investments: ¥270 bn

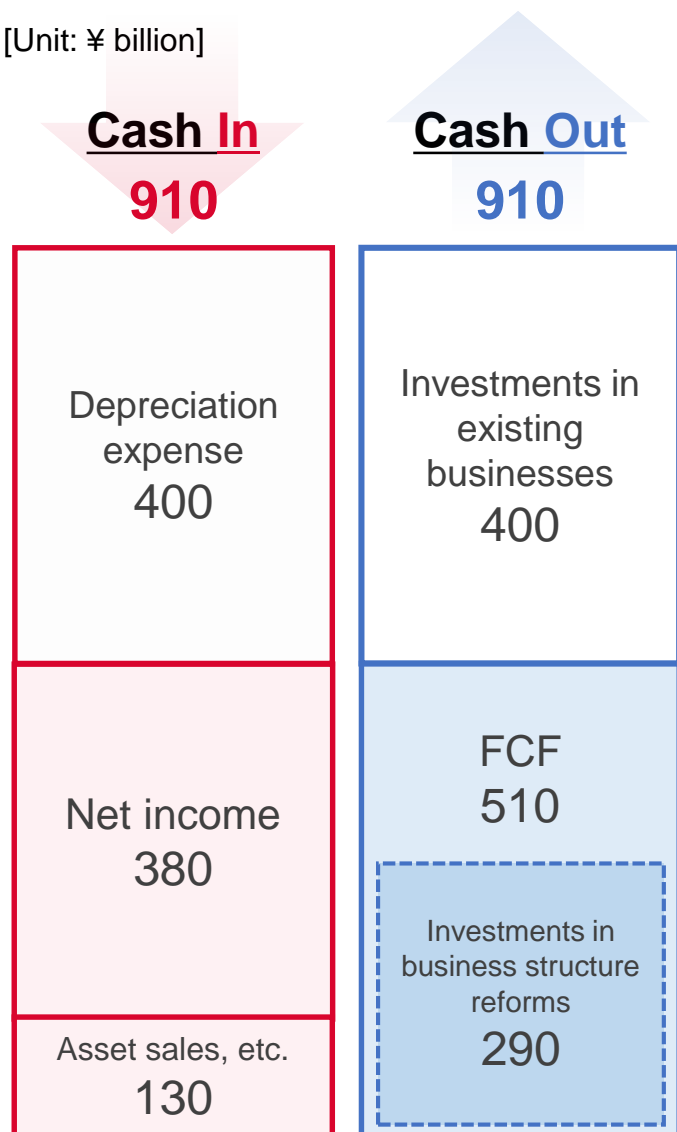
Shareholder Returns Policy

In FY2023-2025, we believe that our key management imperative is to provide shareholder returns mainly by strengthening earnings from existing operations and achieving our earnings plan

- As in the current medium-term plan period, we plan to return **at least 50% of cumulative FY2023-2025 net income excluding inventory impact to our shareholders**
- We plan to provide stable dividends of **¥120 per share**

Cash Flow Allocations (3 years)

[Unit: ¥ billion]



- Cumulative cash inflow of ¥910 billion over 3 years
- The ¥400 billion investment in existing businesses will basically be limited to the amount of depreciation, etc.
- Allocation of free cash flows (net income + asset sales, etc.)
 - Investments in business structure reforms: ¥290 billion
 - Shareholder returns (at least 50% of net income)
 - Maintaining a healthy financial position

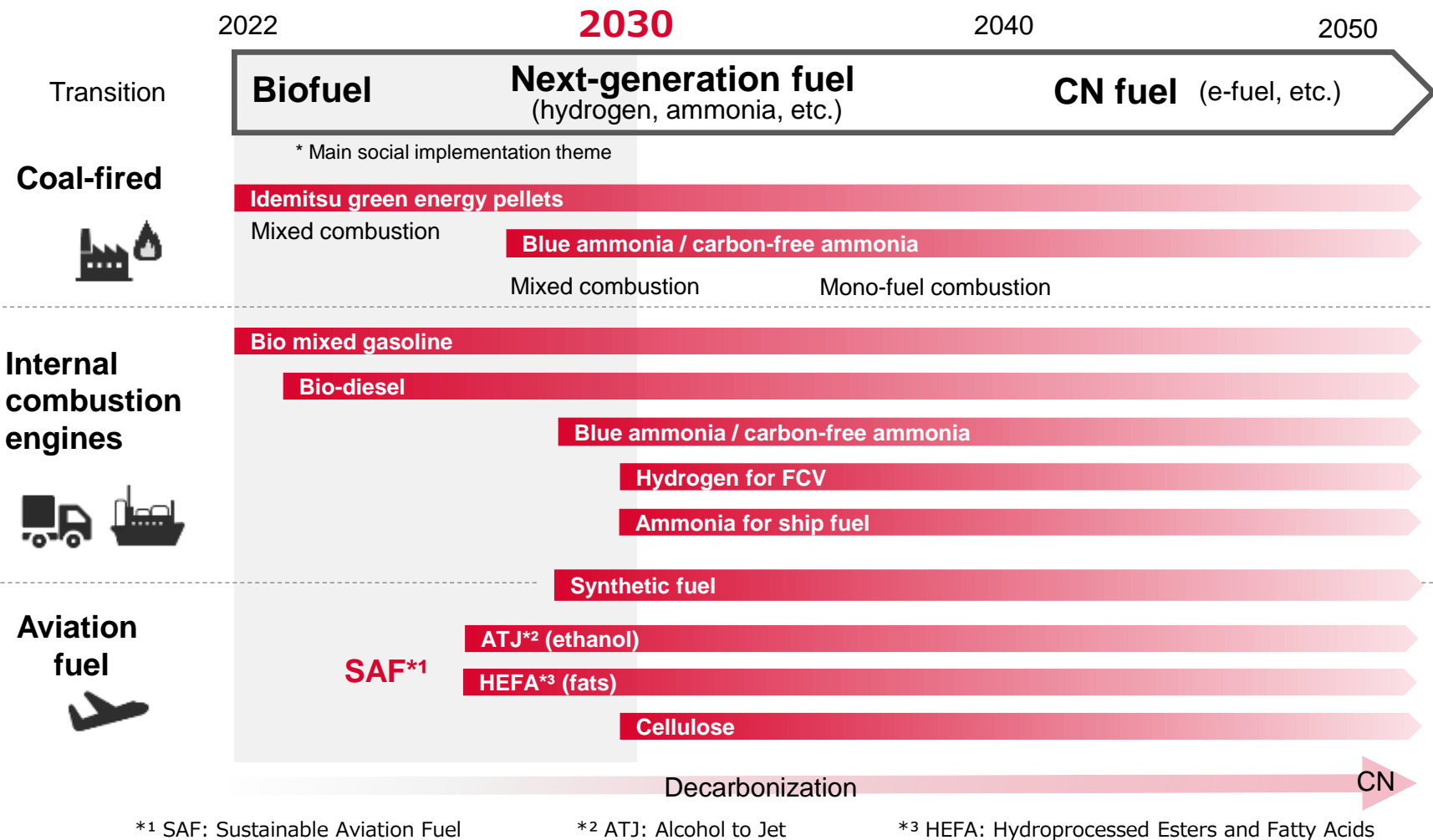
Supplementary materials

Specific Initiatives in the 3 Business Domains towards 2030

- Energy one step ahead
- Diverse Resource Conservation / Circulation Solutions
- Smart Yorozyua

Energy one step ahead

Reverse engineering from 2050 to constantly provide a stable supply of next-generation energy to **fulfill our responsibility to protect lifestyles and the environment**



*1 SAF: Sustainable Aviation Fuel

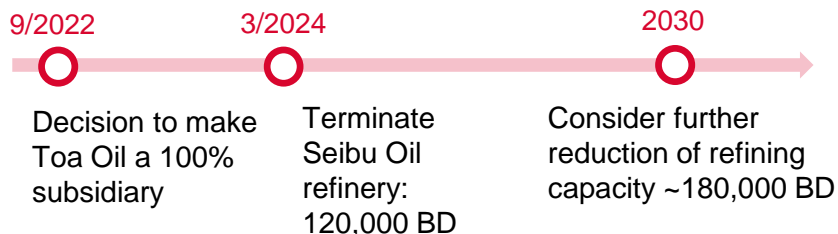
*2 ATJ: Alcohol to Jet

*3 HEFA: Hydroprocessed Esters and Fatty Acids

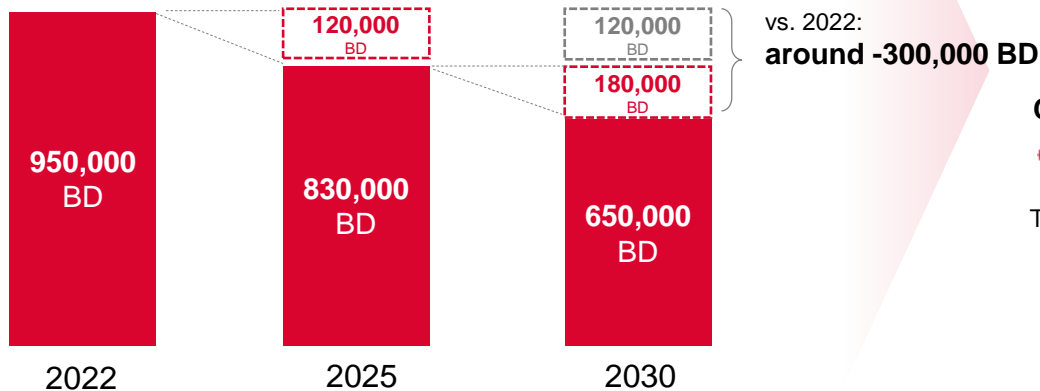
Adjusting Refinery Capacity to Domestic Demand and Establishing CNX Centers

- Domestic petroleum demand in 2030 is expected to decrease by about 20% compared to 2022
- Planning a phased reduction of refining capacity in line with the expected fall in domestic demand to maintain the Idemitsu Group's current capacity utilization (about 90%)
→ **Maintain safe / stable supply and profitability while improving capital efficiency**
- Simultaneously leverage existing oil-refining and petrochemical complex to establish CNX centers

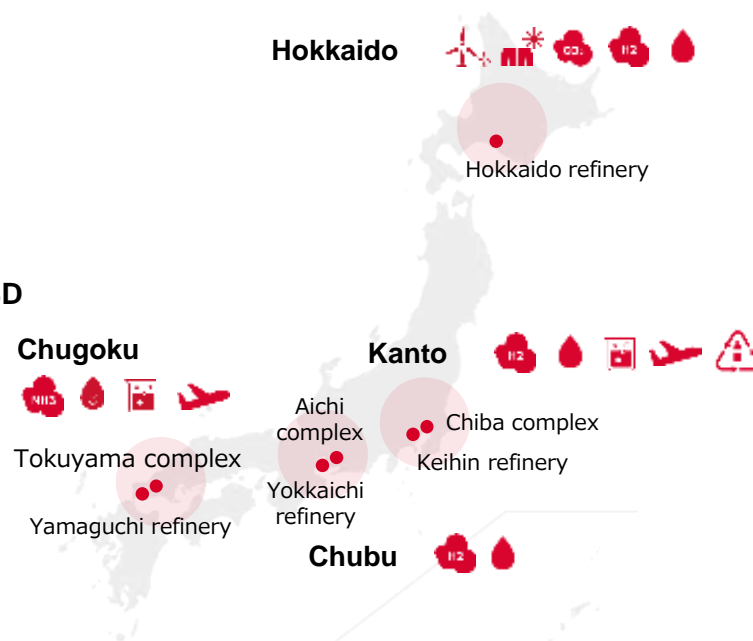
Future Directionality for Reducing Refining Capacity



Idemitsu Group's Refining Capacity



CNX Center Concept for Refineries and Complexes



CNX Center Concept

- Establish CNX (Carbon Neutral Transformation) centers suited to the unique features and demand of each region → CN + regional contribution
- Nationwide expansion after model validation

Demand for ammonia as an alternative to fossil fuel in complexes and power plants

Chugoku



- Establish ammonia supply chain
- Manufacture SAF, bio-diesel, biochemicals
- Biomass business using domestic materials (power generation/heat supply, cellulose-based biomass materials / fuel / petrochemicals)

Tokuyama complex
Yamaguchi refinery

Aichi complex
Yokkaichi refinery

Chubu



- Establish a hydrogen supply chain
- Manufacture SAF, bio-diesel, biochemicals

Hokkaido refinery

Abundant renewable energy and demand for liquid fuel due to cold climate

Hokkaido



- Manufacture hydrogen using renewable energy
- Make CO2 a resource with CCUS
- Manufacture synthetic fuels

Large hydrogen demand in complexes (chemical plants), power plants, and iron mills

Kanto



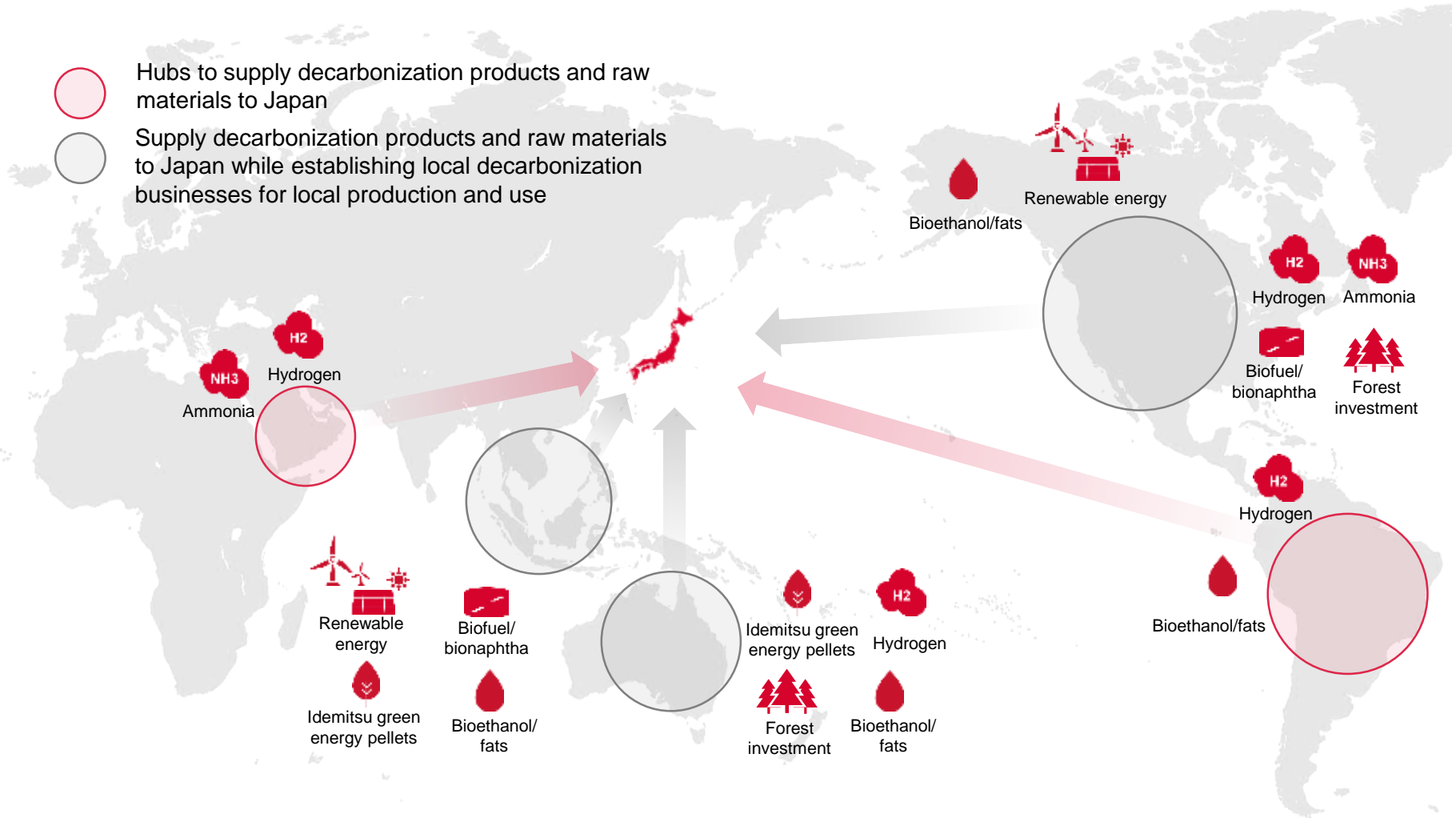
- Establish a hydrogen supply chain
- Manufacture SAF, bio-diesel, biochemicals
- Recycle used plastics

Large hydrogen demand in complexes (chemical plants), power plants, and iron mills

Our Approach to Decarbonize, Creating a New Supply Chain Using Overseas Networks

Energy one step ahead

Create a new supply chain towards the CN by utilizing the expertise through the petroleum trading in the Pacific Rim and the power business

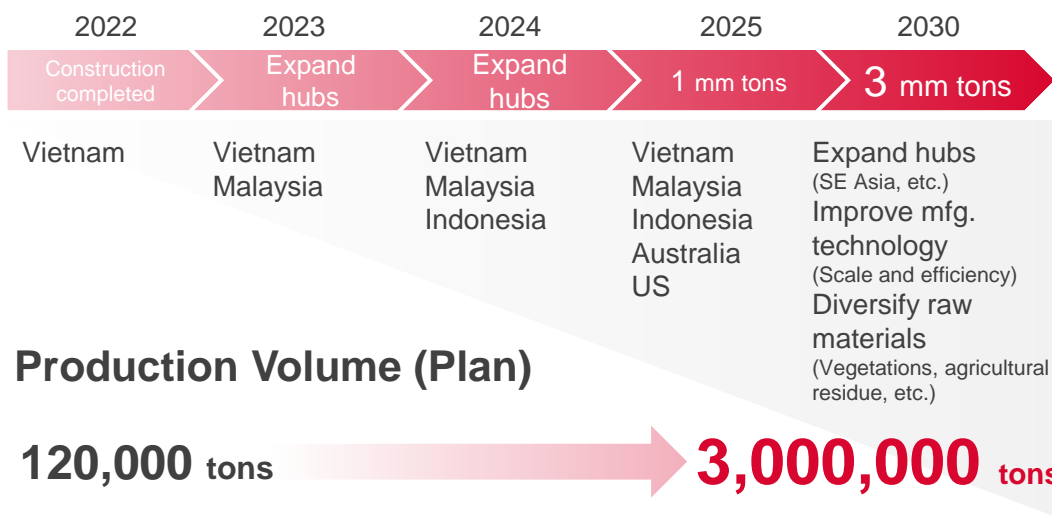


Idemitsu Green Energy Pellets

- Constructing the first commercial manufacturing plant (production volume: 120,000 tons/year) in Vietnam with completion expected during FY2022
- Succeeded in 30% combustion experiment with coal boilers
- Launched research meeting of about 25 domestic companies to accelerate commercialization
- Aiming to provide low-carbon solutions to coal users



Production Roadmap *illustration



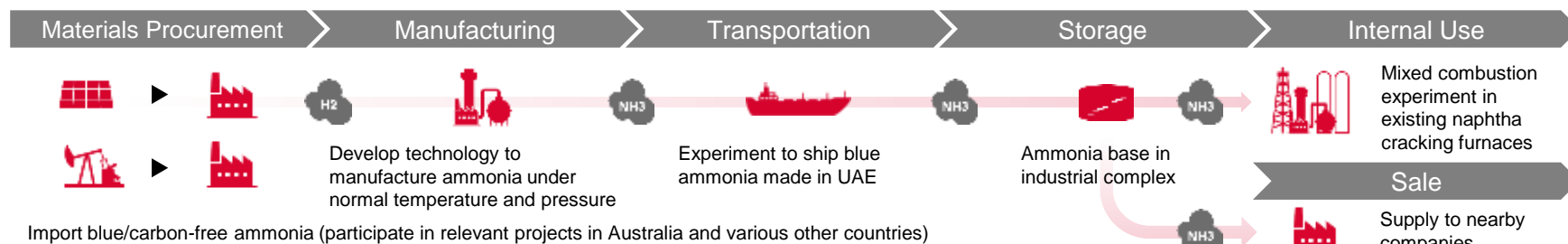
Developing Hubs to Supply Raw Materials



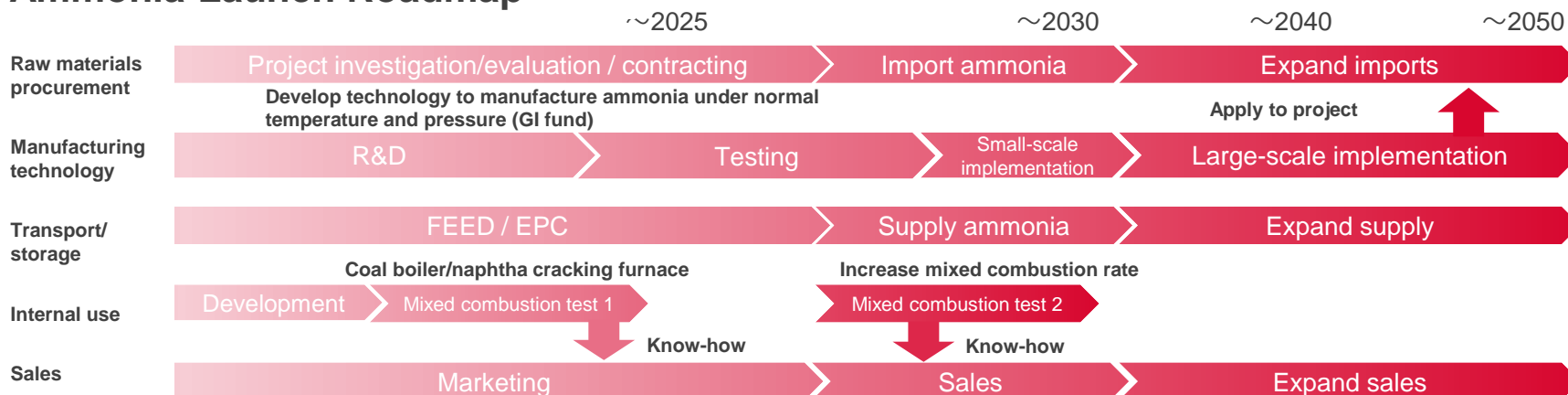
Ammonia Supply Chain

- Create terminals for ammonia imports utilizing the existing facilities (storage facilities, petrochemical equipment, etc.)
- Aim to establish an ammonia supply chain in the late 2020s

Considerations for an Ammonia Supply Chain



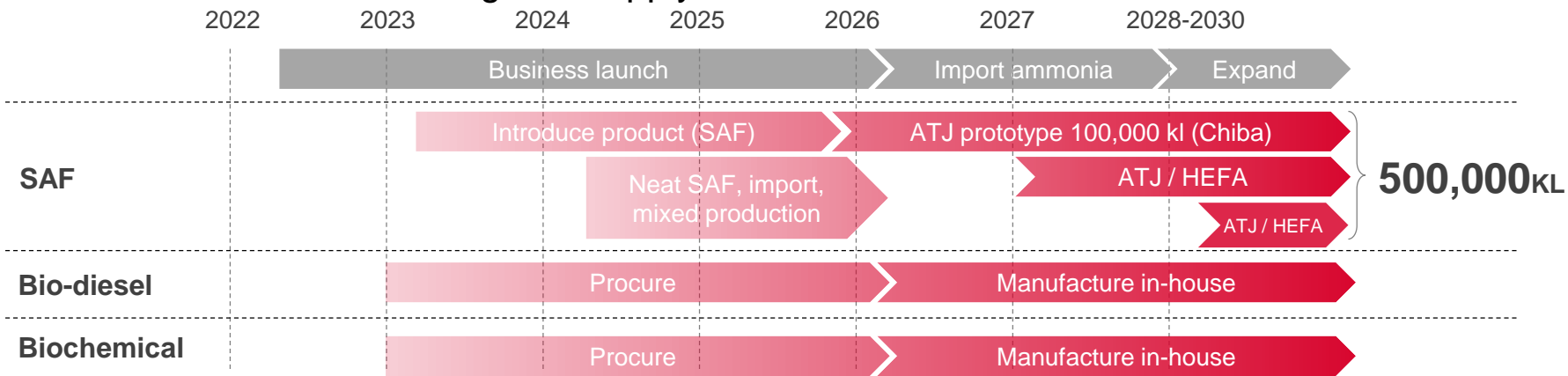
Ammonia Launch Roadmap



Biomass Introduction Roadmap / Supplying SAF

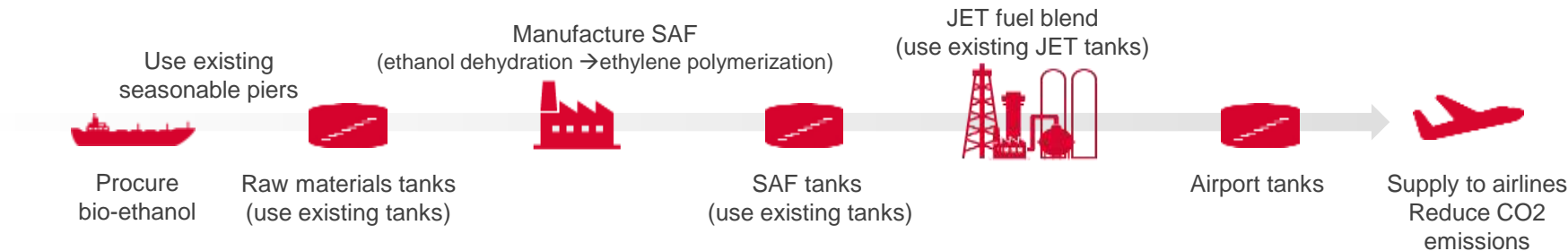
Biomass Introduction Roadmap

- Establish biomass-based green supply chain



Supplying SAF

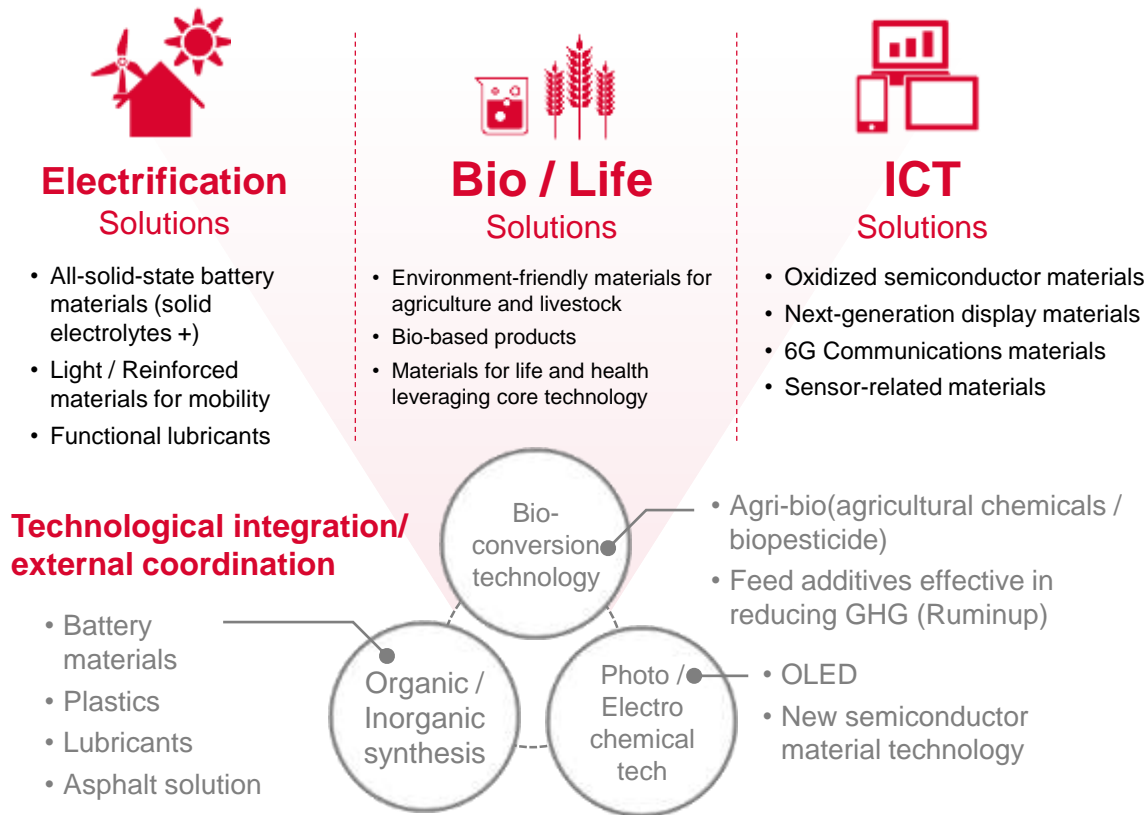
- Constructing **state-of-the-art SAF manufacturing facility** (production volume: 100,000KL) within the Chiba Complex → expecting to commence supply in 2026
- Planning to achieve **domestic production capacity of 500,000KL/year** by 2030
- The initiative was selected for **NEDO's Green Innovation Fund**



Provide CN solutions to businesses and consumers (Scope3) to **leverage technology to contribute to CN / circulatory society**

1 Growth of the Functional Materials

2 Recycle



Used plastics



Solar panels



All-solid-state lithium batteries



3 CCUS

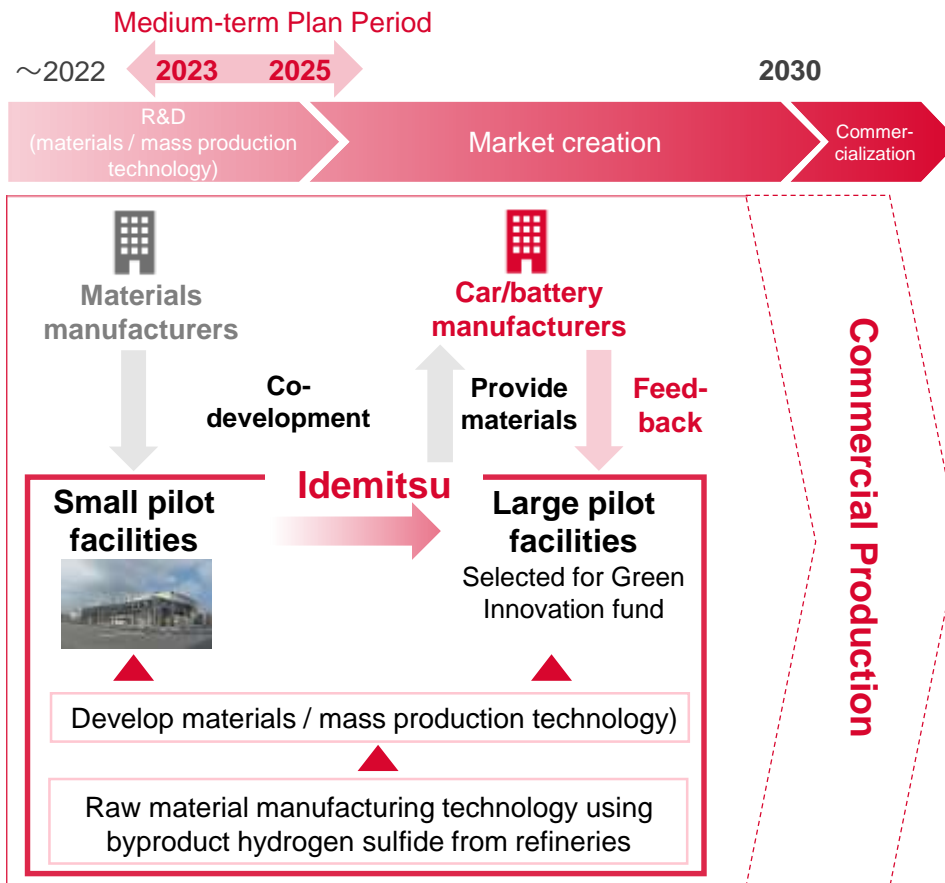
Performing validation testing with METI, etc., and planning to pursue commercialization

Around ¥30 bn/year to be expected for the R&D

Commercializing Lithium Solid Electrolytes

Diverse resource conservation / circulation solutions

- All-solid batteries are a promising technology that fulfills various performance needs including EV safety enhancement, large capacity, and rapid recharging
- We aim to contribute to an electrified society by providing solid electrolytes, which are a key component



Initiatives towards commercialization of solid electrolytes

- Validate mass production process with small pilot facilities
Plant 1 (launched 11/2021)
Plant 2 (to be launched in 2023)
- Validate mass production process with large pilot facilities using the NEDO Green Innovation Fund
- Co-develop new materials combining positive electrode materials and solid electrolytes with a materials manufacturer

Initiatives to expand business domains

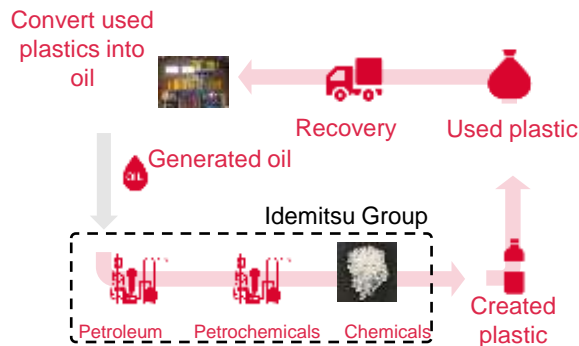
- Develop next-generation battery materials (sulfur positive electrode materials, etc.)
- Recycle all-solid lithium-ion batteries

Resource Circulation / Recycling

Used Plastics

Transition to a resource circulating value chain with used plastics

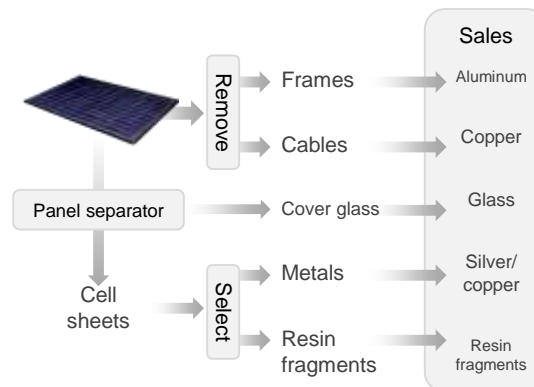
- Amid a heightened social need for recycling of used plastics, we aim to commercialize the used plastic to oil conversion business in FY2025
- Generated oil will be converted into chemicals using petroleum and chemical plants and provided as renewable chemicals



Solar Panels

Creating a solar panel recycling business

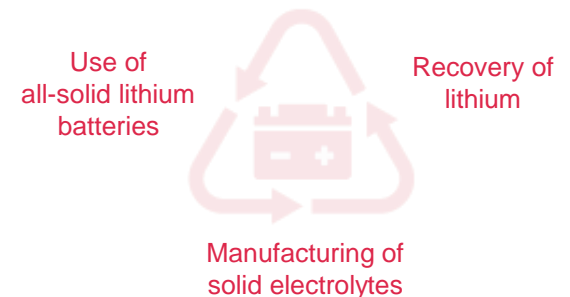
- Rapid growth in used solar battery modules expected from the 2030s
- Aim for >90% material recycling rate and commercialization in FY 2024



All-solid Lithium Batteries

Establishing recycling technology and considering a recycling scheme of all-solid lithium battery

- Growth in EV demand is expected to create a long-term shortage of raw materials such as lithium
- Aiming to add value to the all-solid battery value chain through a recycling scheme for disposed batteries in the future



Initiatives for Resource Conservation / Circulation Solutions

Diverse resource conservation / circulation solutions

Promoting initiatives aimed at the development and social implementation of resource conservation / circulation solutions

Development of a Next-generation Environment-friendly Lubricant

- Launched “idemitsu AshFree” in September 2022. A diesel engine oil first, ash-free low-phosphorus
- Original Idemitsu product that contributes to longer life, reduced DPF* trouble, and lower replacement frequency and fuel consumption

*DPF: Diesel Particulate Filter

Resource conservation through “idemitsu AshFree”

- Reduction of fuel consumption
- Contribution to the longer life of DPF

Per truck per year:

about **130,000 tons**^{*1}



Impact on total cost reduction: About **¥130,000/year**^{*3}

^{*1} DPF manual replacement per truck reduced from 48 hours/year (using Idemitsu's DH-2 oil) to 12 hours with idemitsu AshFree

Carbon Reduction in the Livestock Sector and Resolution of Regional Challenges



Minamiaso, Kumamoto | Business to protect Aso's scenery and groundwater

Creating an ethical livestock sector

Production of Kumamoto Akaushi cows adapted to ethical consumption and maintaining the grassland environment



Source: Minamiaso website

Aim to reduce methane gas excretion from cows

by giving fodder including cashew nut shell liquid



→ **About 36% reduction**^{*} of methane gas in tests that reproduce bovine rumen fermentation [about 0.5 t-co₂ per cow per year]

^{*} Suppression effect observed in artificial rumen tests with cashew nut shell liquid concentration of 50 ppm (Watanabe et al. 2010)

Smart Yorozuya (Smart one-stop shop)

apollostation will be positioned as a **lifestyle support hub** which supports the people of each town and their comfortable daily lives

One-time shop for energy which links people to **diverse energy**



Fulfill our responsibility to provide petroleum, biofuel, electricity, hydrogen, synthetic fuels, dispersed energy, etc.

One-time shop for mobility which links people to **future transportation**



Support regional transportation through the sales/maintenance of gasoline, diesel oil, etc. for cars and next-generation mobility and as a MaaS center



Provide solutions that cannot be solved through digital technology alone through brick-and-mortar stations

Support the people of each town and their comfortable daily lives

Smart Yorozuya (YOROZU)

- YOROZU means “infinite, diverse”
- apollostation will evolve into a YOROZU (infinite and diverse) shop **suited to the needs of each town**

① Environment-friendly eco stations



Scenery protection + promoting use of domestic timber + circular stations

② Dispersed energy supply stations



Energy systems for local production and local consumptions

③ Truck / logistics stations



Diesel + biofuel + hydrogen

④ EV recharging / maintenance stations



Security of EVs

⑤ MaaS stations



Short-distance transport

⑥ Community support stations



Regional community

The possibilities are endless. **A place to support energy / mobility** in each town

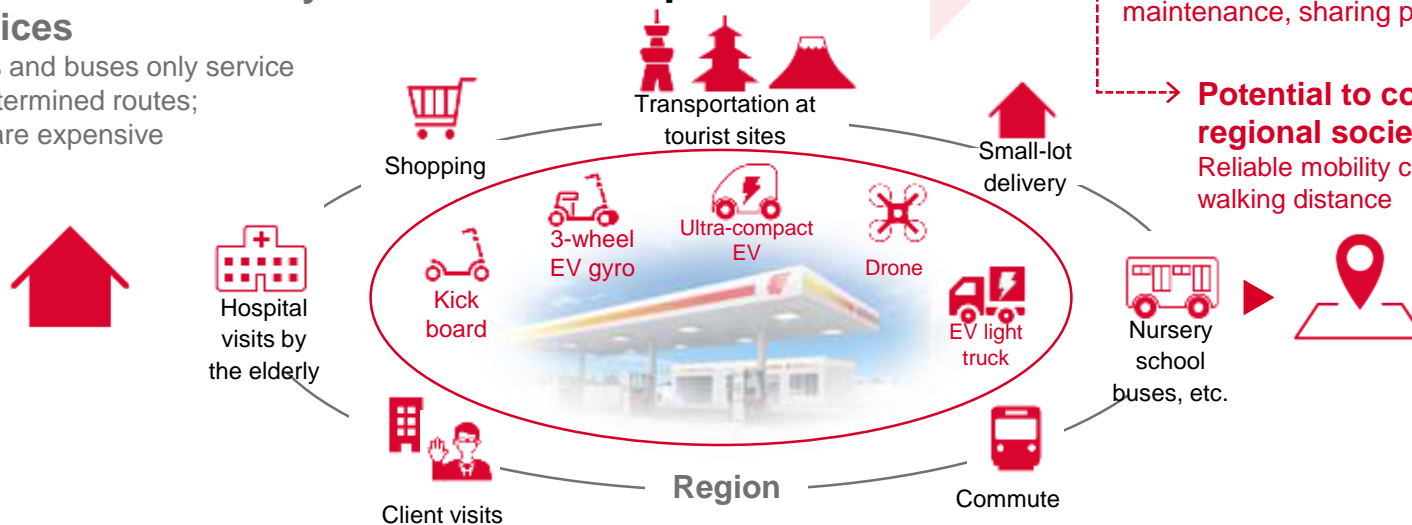
Mobility Services (MaaS Station)

Up to Now

- **Excessive capacity**
Use of cars to transport one person, small / light trucks for parcel deliveries
- **Standardized or costly services**
Trains and buses only service predetermined routes; taxis are expensive

Micro-mobility

On-demand services for various short-distance transport needs



Going Forward

- **Casual, diverse options**
On-demand options for short rides
 - **One-stop services**
Neighborhood needs for maintenance, sharing ports, etc.
- **Potential to contribute to regional society**
Reliable mobility center within walking distance

Ultra-compact EV under development



2022



Under development to meet safety standards

2023



Obtain homologation, market launch

Initiatives in Existing Businesses

- Status of Nghi Son Refinery & Petrochemical (NSRP)
- Business Structure Reforms at Solar Frontier (SF)

Status of Nghi Son Refinery & Petrochemical (NSRP)

- Supply about 35% of domestic petroleum demand in Vietnam, making it a critical facility from the perspective of ensuring energy security
- Contribute to stable supply and to pursue profitability, where domestic petroleum demand in Vietnam is expected to continue to grow going forward following the forecasted economic growth of more than 5% per annum
- Advocate the cooperation among the governments and sponsors as one of the biggest projects between Japan & Vietnam

Earnings Plan

- FY2022: - Achieved profitability in 1H due to high crack spread in Singapore products market
- Forecasting net loss for the full FY due to reduced spread etc., despite expected positive operating income and cash flows
- FY2023: - Forecasting net loss due to reduced refinery utilization for periodic shutdown maintenance (about 2 months) and product spread, despite a ~¥5 billion expected increase in future income resulting from transformation initiatives
- FY2024/2025: - Forecasting continued stable operations and positive operating income and cash flows

Equity Income

Forecasting break-even equity income for FY2022-2025

(Assuming the aggregate loss for F2022-2025 attributable to Idemitsu is within the amount of the loss on write-down of long-term loans recorded in FY2021)

Operational Outlook

Stable operations expected to continue in FY2024 and beyond while attempting to further increase refinery utilization by enhancing the reliability of its facilities

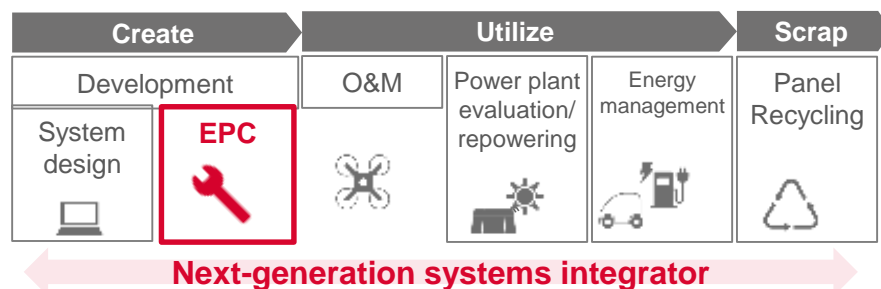
Business Structure Reforms at Solar Frontier (SF)

Business environment

- Expansion of the self-consumption market towards a shift to solar power as the main power source

Key Initiatives during the Medium-term Plan Period

- Internalize and strengthen EPC*1 functions
- Go beyond power plant installation work to provide integrated services including O&M*2, repowering*3, and panel recycling



- Develop/construct equipment/systems/methods to further expand locations for installation
- Power plant maintenance/equipment renewal (including repowering)
- Analyze accumulated data to evaluate power plants
- Energy management to optimize power creation/use/storage
- Recycle panels for disposal



Aim to secure stable earnings by providing solution throughout the life cycle of power plants

Earnings Plan during the Medium-term Plan Period

Forecasting **positive segment profits in FY2024** by improving earnings in the power business and Solar Frontier

*1 EPC: Engineering Procurement Construction








*2 O&M: Operation & Maintenance

*3 Repowering: Reinforcing output by replacing deteriorated equipment, adding modules, etc.

Sustainability

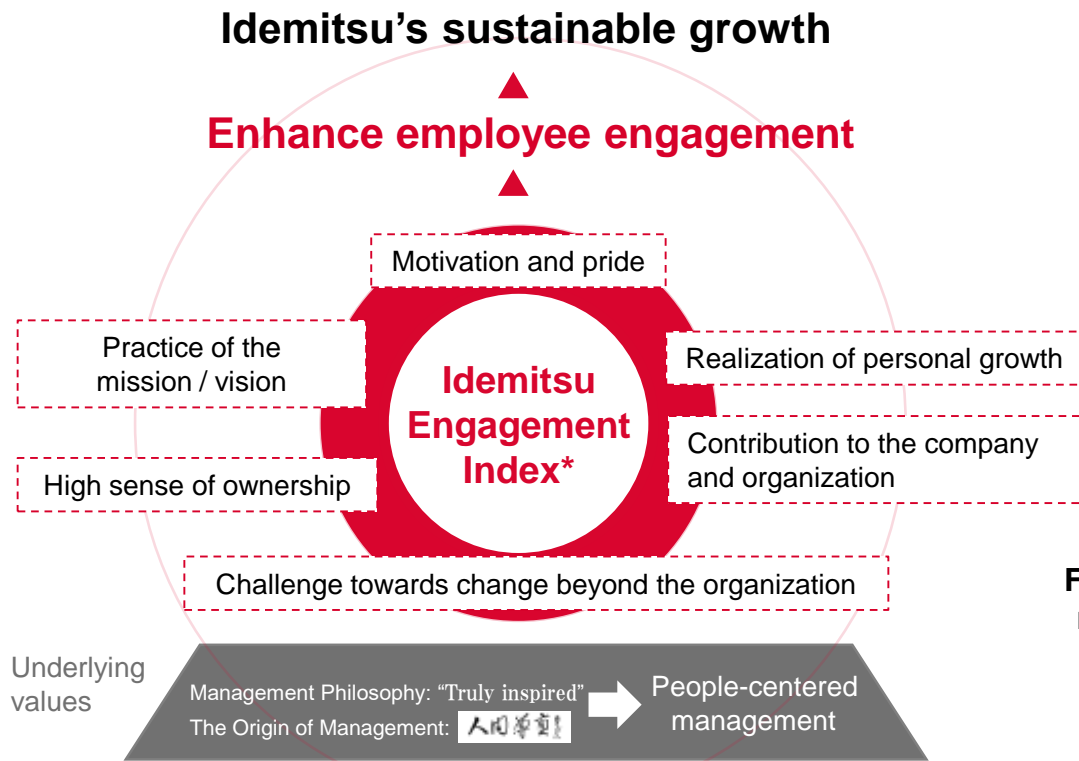
- Materiality (Key Challenges)
- Idemitsu Engagement Index

Materiality (Key Challenges)

Key Items	KPI / Progress Management	Major Related SDGs
<p>1. Contribute to carbon neutrality / circulatory society</p>	<ul style="list-style-type: none"> • Reduce CO2 (Scope1+2) • Contribute to Scope 3 • Investments / business strategy • ROIC, targeted earnings 	
<p>2. Contribute to regional society (energy and mobility)</p>	<ul style="list-style-type: none"> • Investments / business strategy • Number of customers 	
<p>3. Maximize employee growth and engagement</p>	<ul style="list-style-type: none"> • Employee engagement indicators • Human capital investments 	
<p>4. Deepen D&I</p>	<ul style="list-style-type: none"> • Female recruiting ratio • Female ratio in key positions • % males taking childcare leave 	
<p>5. Acceleration of digital innovations</p>	<ul style="list-style-type: none"> • DX investments • Enhancement of productivity 	
<p>6. Progress in governance</p>	<ul style="list-style-type: none"> • Effectiveness of board meetings 	
<p>7. Ensure the health, safety, compliance and human rights</p>	<ul style="list-style-type: none"> • Management health indicators • Human rights due diligence • Major compliance violations • Safety indicators (# accidents, etc.) 	

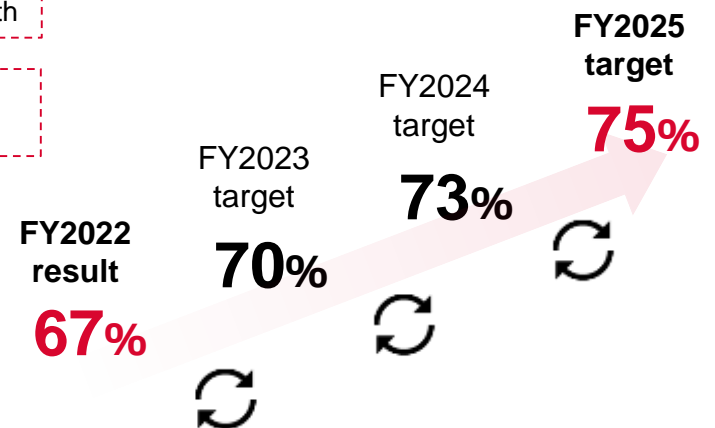
Idemitsu Engagement Index

- We will implement various measures focused on human capital investments based on our belief that **steadily improving the Idemitsu Engagement Index, which reflects commitment to our mission and core values, will lead to sustainable growth**
- The index will be monitored through annual Employee Engagement Surveys in order to brush up improvement measures



Target of "Idemitsu Engagement Index"

Aim to achieve a **level which can be considered as a strength (75%)** towards the final year of the medium-term plan



* Reliability of Idemitsu Engagement Index has been statistically proven

Assumptions

- Progress in the Current Medium-term Plan (financial targets, investments)
- Long-term Energy Business Environment Scenarios towards 2050
- Assumptions
- Sales Volume
- Production Volume
- Segment Operating + Equity Income (excluding inventory impact)
- Disclaimer on Forward-looking Statements

Progress on Financial Targets and Investments in the Current Medium-term Plan

- FY2020-2022 profits significantly exceeded the current medium-term plan due to soaring resource prices, etc. Financial targets for ROIC, ROE, etc. are also expected to be achieved
- Major strategic investments during the period are expected to be lower than the plan, despite CNX-related investments in gas field development in Vietnam, lithium solid electrolytes, Idemitsu Green Energy Pellets, etc.

[Unit: ¥ billion]

	FY2020-2022 Medium-term Plan	FY2020-2022 Forecast	Difference	(Reference) After Revising Assumptions
Operating + Equity Income ^{*1}	410	639	+ 229	-
Net Income ^{*1}	220	388	+ 168	-
ROIC ^{*2} (End of FY2022)	4.2%	8.1%	+ 3.9%	4.1%
ROE (End of FY2022)	8.0%	21.0%	+ 13.0%	7.6%
Investments	570	498	- 72	-

***1 Income figure excludes inventory impact**

***2 Revised definition of ROIC**

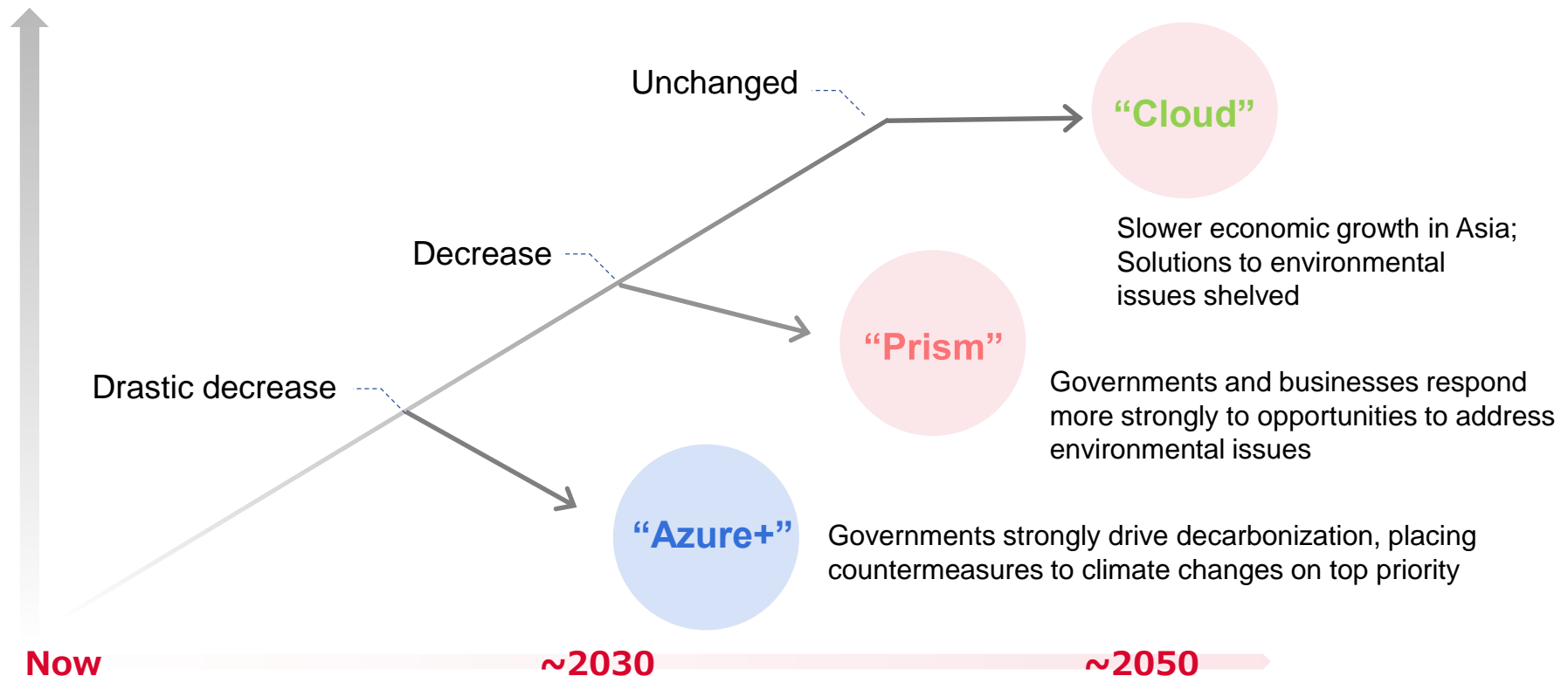
The denominator (invested capital) was revised to only include shareholders' equity which is directly related to cost of capital:
(current) net assets + interest-bearing debt → (new) shareholders' equity + interest-bearing debt

As there have been significant fluctuations in crude oil, foreign exchange, etc. since our announcement of ROIC-based management in May 2021 and as further fluctuations may occur in the future, we will continue to disclose "ROIC excluding inventory impact" going forward

Long-term Energy Business Environment Scenarios towards 2050

- Trends toward decarbonization accelerated further through the pandemic
- “Azure” was applied as a premise of this medium-term plan

Asian-Pacific
Petroleum Demand



Assumptions

	Metric	Unit	FY2022	Medium-term Plan		
			Forecast	FY2023	FY2024	FY2025
Crude oil	Dubai	\$/BBL	96.2	90	90	90
	Brent	\$/BBL	102.4	93.5	93.5	93.5
Coal	Australian spot	\$/t	347.8	170	120	110
Foreign exchange	USD	JPY/ USD	139.5	130	130	130
Basic chemicals: Spread on Asian products	Paraxylene	\$/t	330	270	330	330
	Styrene monomer	\$/t	460	460	470	530

Sales Volume

Unit :Thousand KL

	FY22 Forecast	Medium-term Plan		
		FY2023	FY2024	FY2025
Gasoline	12,960	12,550	12,230	11,920
Kerosene	3,900	3,750	3,630	3,520
Diesel oil	10,310	10,160	10,110	10,080
A heavy oil	3,290	3,090	2,970	2,870
4 core products subtotal	30,460	29,550	28,940	28,390
Jet fuel	2,280	2,380	2,380	2,370
Other	3,020	2,190	1,490	1,300
Domestic fuel subtotal	35,760	34,120	32,810	32,060
Exports	9,600	9,650	5,720	5,180
Petroleum total	45,360	43,770	38,530	37,240

Unit: Thousand t

Basic chemicals	3,760	4,050	3,920	4,020
-----------------	-------	-------	-------	-------

Production Volume

Unit: Thousand BOED

	FY22 Forecast	Medium-term Plan		
		FY2023	FY2024	FY2025
Norway	14.8	13.6	12.3	11.6
Vietnam	16.3	13.5	13.3	13.3
Petroleum/gas total	31.0	27.1	25.6	24.9

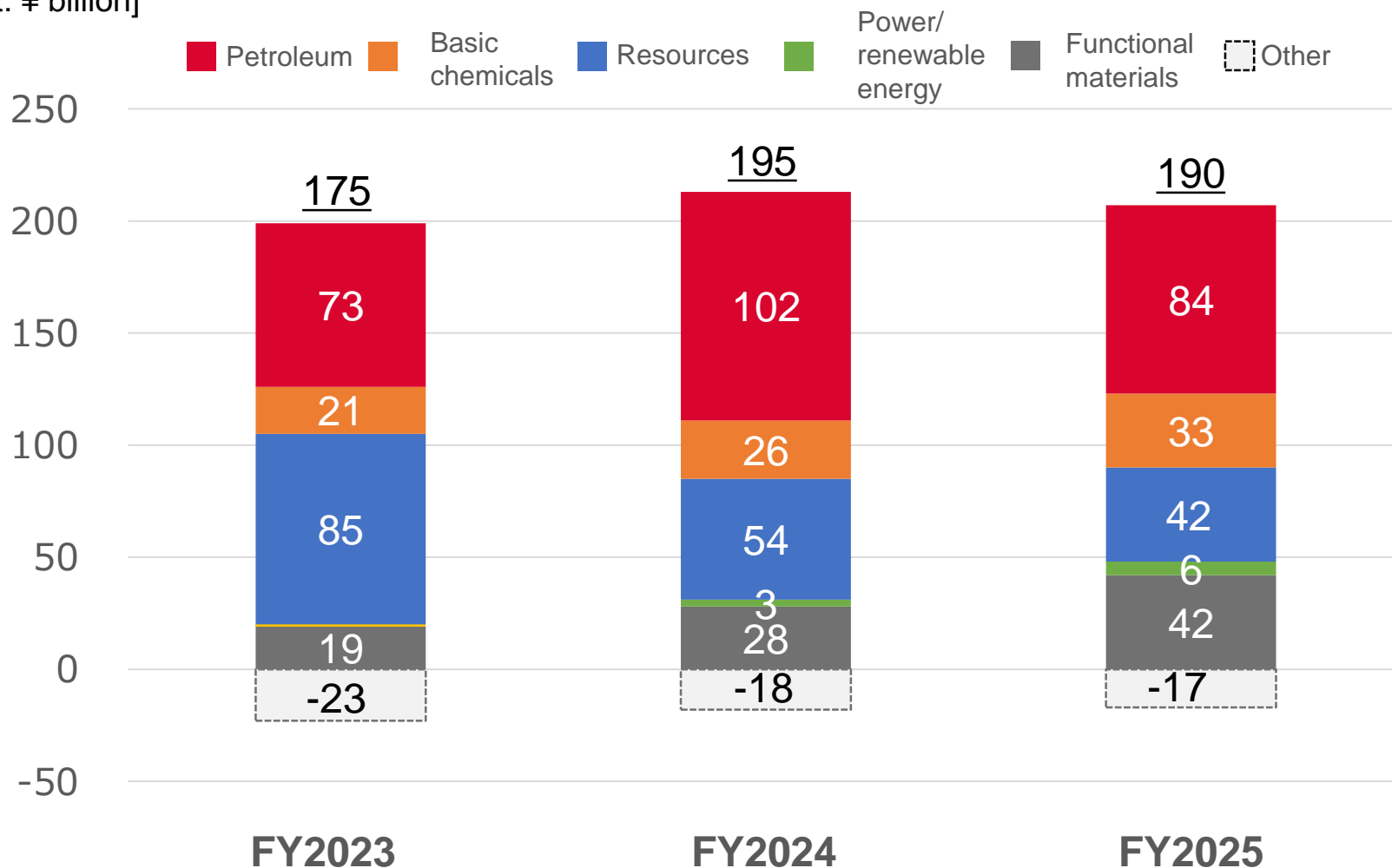
Unit: Thousand t

Ensham*	2,910	-	-	-
Muswellbrook*	940	-	-	-
Boggabri	5,320	5,700	5,900	5,900
Australia total	9,170	5,700	5,900	5,900

* Production of Ensham and Muswellbrook are not included after FY2023 due to the termination of the operation, etc.

Segment Operating + Equity Income (excluding inventory impact)

[Unit: ¥ billion]



Disclaimer on Forward-looking Statements

Information on performance forecasts, strategy, and management policies, etc. stated herein other than historical facts are forward-looking statements which have been prepared by Idemitsu's management based on currently available information.

Many factors with potential risks and inherent uncertainties may affect actual performance, including macroeconomic trends, crude oil prices, trends in demand for petroleum products, market conditions, foreign exchange rates, and interest rates.

As a result, please be advised that actual performance may differ significantly from forecasts, etc. due to fluctuations in such factors.