

Compass

A c t i o n

A detailed roadmap for achieving Compass 2030

November 26, 2021

Tokyo Gas Co., Ltd.

- ✓ Compass 2030 is the Tokyo Gas Group's management vision announced in November 2019. It sets forth three challenges for transforming the Group for the future: 1) Leadership in the transition to Net-Zero CO₂, 2) Establishment of a value co-creation ecosystem, and 3) Transformation of the LNG value chain. **We are now steadily advancing along the path laid out and will further accelerate our actions for attaining this vision.**
- ✓ Dramatic changes are now sweeping across the environmental, social, institutional, and market landscapes. Japan aims to become carbon neutral by 2050 and is seeking to lower its greenhouse gas emissions by 46% in 2030. Momentum is growing for the realization of the SDGs and an inclusive society. The energy market is becoming increasingly volatile. In this period of massive change never before encountered in our company's history, **we have formulated "Compass Action" as a detailed roadmap for achieving Compass 2030.**
- ✓ We recognize that we have a mission to society that our Group is uniquely qualified to perform: firmly leading the way to low-carbon and decarbonized society with a mix of renewable energy and LNG/natural gas as a promising transitional energy, and providing solutions to the diversifying challenges faced by society, communities, and customers. We will pursue the changes needed to expeditiously fulfill this mission, and in so doing ensure sustainable management and enhance our enterprise value.

Compass Action Focuses

Focus

1

Lead transition to Net-Zero CO₂

Responsibly lead the transition with gaseous & renewable energy

Lead the transition to a sensible, realistic carbon-neutral society while firmly maintaining a stable supply of energy

Focus

2

Establish a value co-creation ecosystem

Accelerate value co-creation via digital transformation and reinforced face-to-face engagement

Evolve our social challenge-solving businesses by advancing digital transformation and combining it with our strengths in face-to-face engagement

Focus

3

Transform the LNG value chain

Improve each business's earning power and resilience to change

Transform into a corporate culture that enhances earning power across each business, thereby supporting the sustainable growth of the Group as a whole

Part I: Profile

1. Compass Action: Overview
2. Responsibly lead the transition with gaseous & renewable energy
 - Roadmap for transitioning to carbon neutrality
 - Sophisticated use of natural gas: Transitioning from low-carbon to decarbonized
 - Decarbonizing gas: Building a carbon-neutral methane value chain
 - Decarbonizing electricity: Building a renewable energy value chain
3. Accelerate co-creation via both digital transformation & strengthening of face-to-face engagement
 - Digital transformation & strengthening of last-mile services (B2C)
 - Digital & face-to-face solutions (B2B)
4. Improve each business's earning power and resilience to change
 - Transitioning to a holdings group structure
 - Group human resource reforms
 - Cost structure reforms & DX
5. Targeted investment in growth areas
6. Financial strategy supporting investment

Part II: Close-up

- Core strategies & concrete actions for each business

Reference: Progress status of key actions toward achieving Compass 2030 (past 12 months)

Compass Action: Overview

Vision

Changes in environment

Accelerating toward vision

Focuses of transformation

Our Group's strengths

Point 2

Establish a value co-creation ecosystem

Social

Growing emphasis on ESG & SDGs, coexistence of digital/face-to-face preferences
Expectations for solutions to diversifying challenges faced by society, communities & customers

Accelerate value co-creation via digitalization and reinforced face-to-face engagement

Expanded investment in new businesses + evolution of social challenge-solving businesses

- **Transform into the energy market's digital marketing front runner**
 - ✓ Nationwide operation as a digital marketer (TG Octopus Energy)
(Use digital & face-to-face channels to increase retail power contracts beyond 5 million in 2030)
(2.87 million contracts as of end-September 2021)
- **Evolve into the No. 1 player in customer satisfaction through value co-creation at the last-mile^{*1}**
 - ✓ Launch services in Kanto area that provide solutions to each type of lifestyle need, then expand nationwide via alliances
- **Transform into a provider of solutions for community challenges**
 - ✓ Nationwide & overseas solutions for decarbonization & resilience strengthening through coordination with local government & businesses

Accelerate value co-creation through low-carbon & decarbonization solutions

- Strong bonds with customers & communities
- Customer accounts centered on Tokyo metro area

Point 1

Lead transition to Net-Zero CO₂

Environmental

Japan aims to be carbon neutral in 2050 and to reduce GHG emissions by 46% in 2030
Evolve the role of LNG/natural gas as transitional energy

Responsibly lead the transition with gaseous & renewable energy

Solid investment in LNG/gas + expanded investment for deploying decarbonization technologies

- **Transform into the top leader at the forefront of the transition**
 - ✓ Thoroughly use natural gas + develop practical CCUS^{*2}
 - ✓ Strengthen gas-fired thermal power as balancer for renewable energy
- **Create value chain for carbon-neutral methane^{*3}**
 - ✓ Form alliance for achieving low-cost, practical deployment of hydrogen & carbon-neutral methane
(Hydrogen: JPY30/m³^{*4} or lower in 2030)
- **Create renewable energy value chain leveraging our Group's unique strengths**
 - ✓ Establish revenue model that covers from power source development, O&M^{*5} to renewable energy sales.
(Renewable power source transaction volume in 2030: 6 GW*)
(*Compass 2030's original target was 5 GW)

Increase business agility for the transition

- Ability to deal in multiple transitional methods
- Power to offer decarbonization solutions to both the supply side and the demand side

Point 3

Transform the LNG value chain

Market & Institutional

Increased market volatility, further liberalization
Further growth can be achieved by turning energy liberalization & market volatility into business opportunities

Improve each business's earning power and resilience to change

Transition to holding company system + stronger portfolio management of multiple businesses

- **Transform into corporate culture that enhances the earning power of each business**
 - ✓ Enable internal companies & business subsidiaries to stand on their own feet
 - ✓ Major realignment of management structure on a Group-wide level
 - ✓ Establish a business model that leads our market volatility responsiveness toward the stabilization of earnings
- **Shift to a human resources system that encourages pursuit of challenges in ways that leverage diversity**
 - ✓ Employ and cultivate diverse human resources at each Group company and operating company
- **Pivot to a financial strategy that promotes growth investing**
 - ✓ Step up investment in growth areas by selling/replacing assets and boldly revamping cost structure

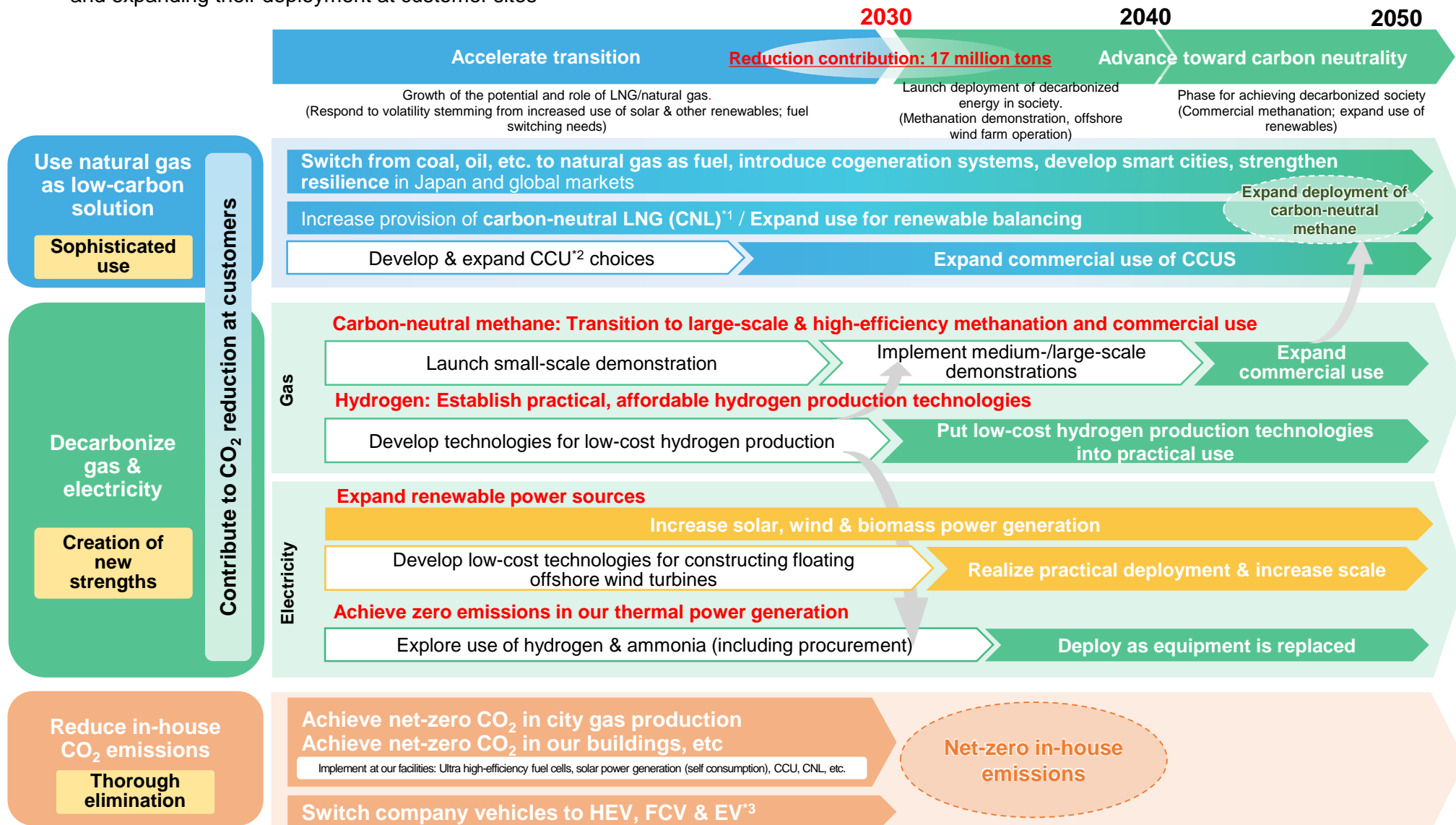
- Comprehensive strength spanning from energy procurement to sales
- Operational strength in energy infrastructure & services

^{*1}: Technical work performed at customers' residences ^{*2}: Carbon capture, utilization & storage ^{*3}: Methane synthesized (methanated) from CO₂-free hydrogen (produced from renewable source electricity) and CO₂ captured at power plants, factories, etc. ^{*4}: The hydrogen supply cost (CIF price) target set by the Japanese government. It is premised on a reduction in the cost of hydrogen production equipment, and achievement of low-cost electricity procurement made possible by factors such as growth of the renewable energy market. ^{*5}: Operation & maintenance

Roadmap for transitioning to carbon neutrality

- Achieve a carbon reduction contribution of **17 million tons by 2030*** across all our business activities worldwide
- Lead the transition to carbon neutrality by developing strengths in gas/electricity decarbonization technologies** and expanding their deployment at customer sites

*Compass 2030's original target was 10 million tons in Japan only.



*1: LNG deemed carbon neutral because greenhouse gas emissions generated by the processes from natural gas exploration to combustion have been offset with carbon credits received on forest conservation projects, etc.

*2: Carbon capture & utilization *3: Hybrid electric vehicles, fuel cell vehicles & electric vehicles

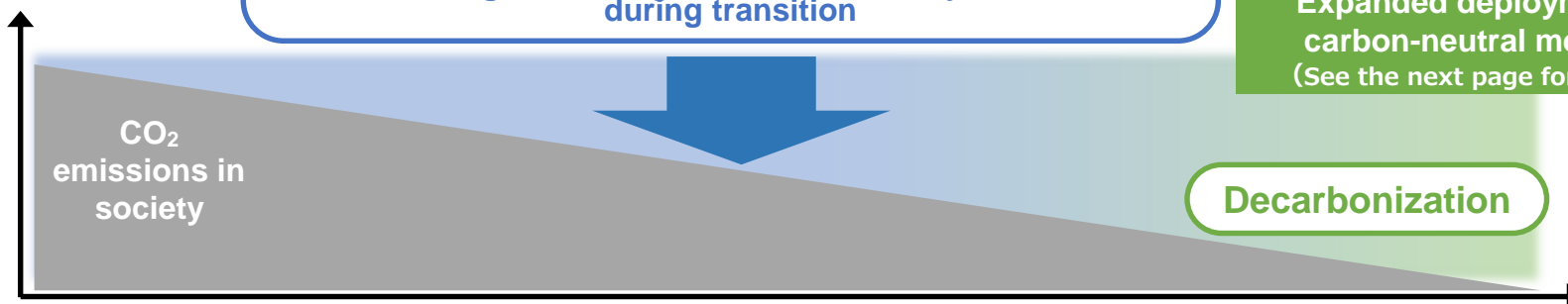
Sophisticated use of natural gas: Transitioning from low-carbon to decarbonized

- During the transitional period, we will **contribute to reduce CO₂ emissions at domestic & overseas customer sites** by promoting **fuel switching, smart city development, carbon-neutral LNG, and CCUS**
- We will firmly lead the transition while **containing the social costs of low carbon and decarbonization**, responsibly ensuring the stable supply of energy.

Our Group's strengths: A proven track record in using natural gas for low-carbon solutions and know-how in optimal energy management

Contributing to thorough CO₂ reduction by Natural Gas during transition

Expanded deployment of carbon-neutral methane
(See the next page for details)



Switching to natural gas as a fuel

- ✓ Switch fuels used in manufacturing industries^{*1} from coal, oil, etc. to natural gas **(a shift to low-carbon in a heat use accounting for approx. 70% of Japan's final consumption of energy)**
- ✓ Introduce high-efficiency equipment
- ✓ Build high-efficiency LNG-fired power plants

Sophisticated use of natural gas can contribute to tremendous reduction of CO₂ emissions

^{*1}: Coal & oil account for approx. 60% of primary energy supply in Japan, and there is strong potential in fuel switching at overseas sites, especially in Asia

Sophisticated smart energy networks

- ✓ Utilize digital tools in the use of electricity & heat (optimized operation based on collection & analysis of data on heat load, operating condition, etc.)
- ✓ Establish area-wide optimized operation combining natural gas cogeneration, renewables, fuel cells, etc.
- ✓ Strengthen solutions that support ZEH & ZEB^{*2}

Deployment in Japan and abroad can contribute to energy savings, lower CO₂ emissions, and better resilience

^{*2}: Buildings & homes designed to completely offset primary energy consumption per year

Carbon-neutral LNG/CCUS

- ✓ Expand the use of carbon-neutral LNG
 - Establishment of Buyers Alliance (30 corporate members)
 - Development of quality control process
- ✓ CO₂ capture/utilization^{*3} at customer sites, storage (CCUS)

Capturing & offsetting natural gas-related CO₂ emissions

^{*3}: Development of on-site CCU technology for producing potassium carbonate using CO₂ from city gas equipment, launch of CO₂-absorbing concrete production

Decarbonizing gas: Building a carbon-neutral methane value chain

- We will **establish our own core technologies in methanation & hydrogen production** as part of our efforts toward decarbonization of gaseous energy
- We will **build a carbon-neutral methane value chain to realize deployment in future society** through coordination with public-private alliances and overseas players

Our Group's strengths: Hydrogen production expertise gained from fuel cell development, etc., and Japan's foremost gaseous energy supply infrastructure

Low-cost, large-volume production

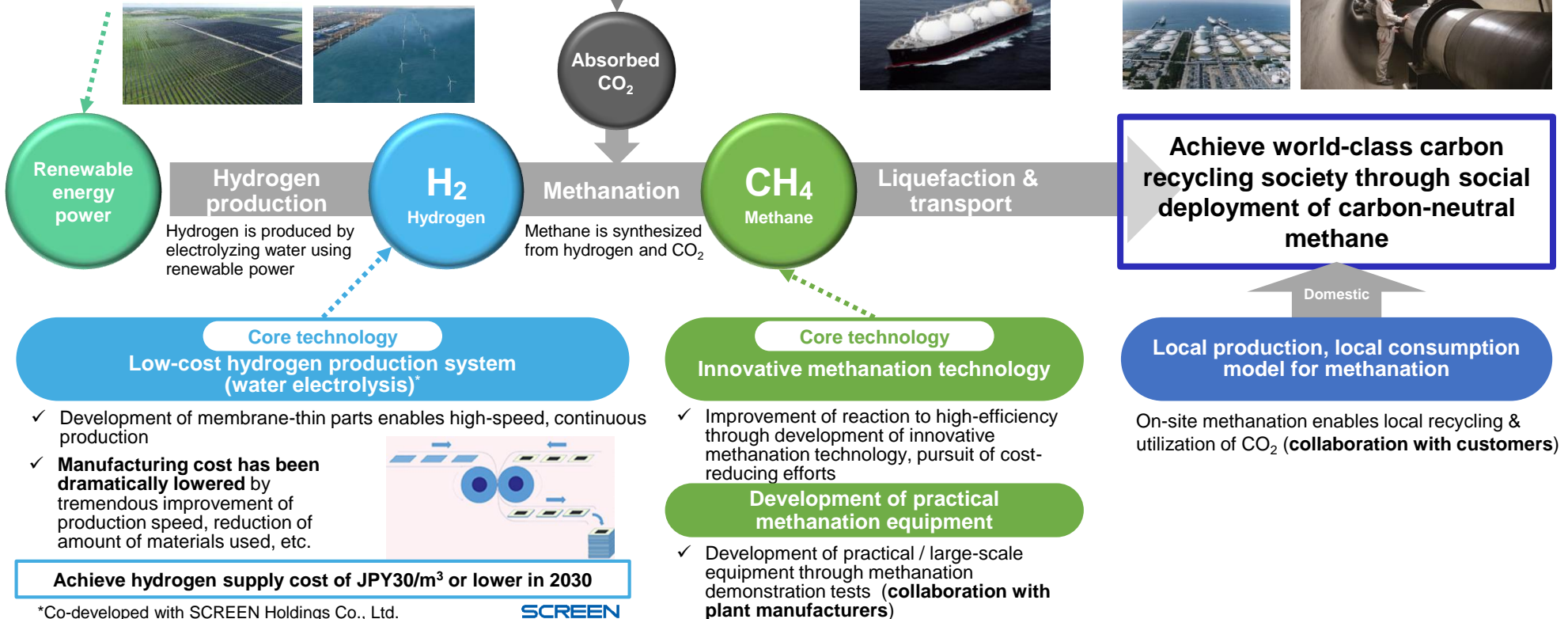
Transport using existing equipment

Utilization through existing infrastructure

Selecting suitable methanation sites

Leveraging existing infrastructure

- ✓ As groundwork for large-scale methanation overseas, select suitable sites with firm access to low-cost, large-volume renewable source electricity & CO₂ and build supply chain (**collaboration with a trading companies, etc.**)



Partnerships at each point of the supply chain
Formulation of rules and global standards for international CO₂ offsetting (Public-Private Council for Promoting Methanation)

Establish future revenue base by spreading the use of carbon-neutral methane, which can utilize existing LNG/natural gas transportation and distribution infrastructure

Decarbonizing electricity: Building a renewable energy value chain

- **Build a renewable energy value chain leveraging our Group's unique strengths** by engaging in a full spectrum of operations, from development of renewable power sources to all O&M stages, and from power generation to power sales
- **Expand renewable power source transaction volume in Japan & global markets beyond our original vision (5 GW* → 6 GW), while maintaining profitability** *Compass 2030's original target

Our Group's strengths: Stable long-term operation of power generation infrastructure, O&M capabilities, customer base

Large-scale renewable energy development

Expansion of different types of power sources

2030

Solar, onshore wind & biomass power

Bottom-mounted offshore wind power

Floating offshore wind power

Core technology

Floating offshore wind power technology, with potential for early commercialization

- ✓ Early deployment of basic technologies and supply chain of Principle Power, a global leader in testing and commercialization whose owners include Tokyo Gas
- ✓ Achieve competitive pricing by developing technologies for low-cost mass production of floating platforms



Steadily expand solar, onshore wind, biomass, offshore (bottom-mounted) power sources
Achieve early deployment in society by focusing on development of floating offshore wind power

Development-to-operation revenue model

Development & construction

Ownership

Management (O&M)

Engineering and O&M by Tokyo Gas Engineering Solutions

Engage as a Group in all stages to stand out from the pack and improve profitability

Revenue sources spanning from power generation to sales

Utilization of generated power

Market trading

Procure our own power & fold into portfolio (power & environmental value)

Sales to customers (create diverse rate plans)

Tokyo Gas

TG Octopus Energy



Develop decentralized renewables

- ✓ Leverage experience in on-site business to spread solar power among residential, commercial, and industrial customers nationwide

Utilize generated power

- ✓ Utilize power generated by customers
- ✓ Offer our own purchasing service

Digital transformation & strengthening of last-mile services (B2C)

- Expand areas of value provision to customers by leveraging **digital marketing** and enhance lineup of **last-mile services**

Our Group's strengths: Digital expertise of Octopus Energy, last-mile solution capabilities, channel networks of LIFEVAL, etc.

Digital transformation of B2C marketing

Launch of Octopus Energy services (Nov. 2021)



Founded domestic joint venture (TG Octopus Energy) as a new brand, under a **strategic partnership with Octopus Energy**,* a fast-growing company in the UK's energy market

*The company acquired over 3 million customers in just 6 years in the UK's highly competitive electric power market

Diverse electricity rate plans

- ✓ Broaden range of rate plan choices, including renewable energy, time-based, market price-linked, institutional (low-voltage), and other plans



Digital marketing, CRM*

- ✓ Digital communication focused on customer engagement, active social listening, customer support with leveraging social media
- ✓ Acceleration of marketing cycle, and expansion of satisfied customer base by offering one-to-one services tailored to customer lifestyles and values

*Customer relationship management

Nationwide deployment

- ✓ Phased expansion of sales areas, with **nationwide deployment** by first half of FY2022

Increasing customer satisfaction and creating shared value by offering personalized energy services

Expansion of B2C last-mile services

Full entry into plumbing repairs & housecleaning business

Expand services supported by strengths in last-mile service



Sophisticated operations (call taking, troubleshooting, inventory management, solution proposal)



Providing value through combinations of services

Stress-free

Home equipment

- Special support for gas equipment
- Plumbing & air conditioning repairs
- "Zuttomo Solar," "Anshin W Denchi" (solar power + storage batteries) etc.

Housework support

Monitoring

- Housecleaning
- Residential monitoring service
- Vacant home management service
- Elderly care support, etc.

Peace of mind

Nationwide deployment

- ✓ Phased expansion of sales areas through alliances, etc., with eye on nationwide deployment

Contributing to specific lifestyle needs and social challenges quickly, conveniently, reliably and affordably

Full tap into advantages of digital & face-to-face engagement to increase no. of energy service accounts

Digital & face-to-face solutions (B2B)

- **Nationwide & global offering of packaged solutions** that enhance customer convenience and facilitate community growth while also enabling low-carbon and decarbonizing approaches

Our Group's strengths: Remote monitoring & control technologies that use AI, etc., ability and experience in providing solutions, from proposal to implementation & management

Enhancing convenience with B2B digital solutions

Using AI, remote control, etc. to help conserve energy, lower CO₂ emissions, and save labor

HelionetAdvance

- ✓ AI-driven forecasting of electricity & heat demand at offices & factories
- ✓ Reduction of energy usage & CO₂ emissions through automated control of operations hard to perform manually



Joy series

- ✓ Central monitoring of customer utility equipment at factories, etc.
- ✓ Responding to needs for labor-saving through combination with energy services

Virtual power plants (VPP)

- ✓ Utilize customers' electricity surplus
- ✓ Provide customers with new revenue opportunities

Strengthening total packaged solutions in B2B face-to-face services

Offering one-to-one solutions from the customer's perspective

SolarAdvance



- ✓ Installation of solar generators without need for customers to make initial investment
- ✓ Provision of total solution including maintenance & management (promotion of local production/local consumption and self-production/self-consumption of renewable energy)

Engineering

- ✓ Nationwide & global deployment supported by nationally top-level engineering capabilities (design & construction to operations & maintenance)

Environmental consultation

- ✓ All-in-one support spanning CO₂ emissions volume analysis, planning, disclosure, and solution implementation

Evolve into solutions provider that tackles customer's specific needs and community challenges

Nationwide & global deployment

Advanced smart energy networks

Traditional smart energy

- ✓ Contribute to urban development by conserving energy, lowering CO₂ emissions, and strengthening resilience through combination of heat, electricity & renewables

Expand range of services

Advanced smart energy

- ✓ Net-Zero CO₂ (CNL, renewables)
- ✓ Provision of BCPaaS* (equipment earthquake proofing + disaster mitigation services)
- ✓ Services that improve office and lifestyle comfort

*BCP services optimized for each customer's needs

Provider of solutions to community challenges

Japan

- ✓ Solution of community challenges such as low-carbon/decarbonizing and resilience enhancement through coordination with local government & businesses (formation of comprehensive partnership agreements)

Global

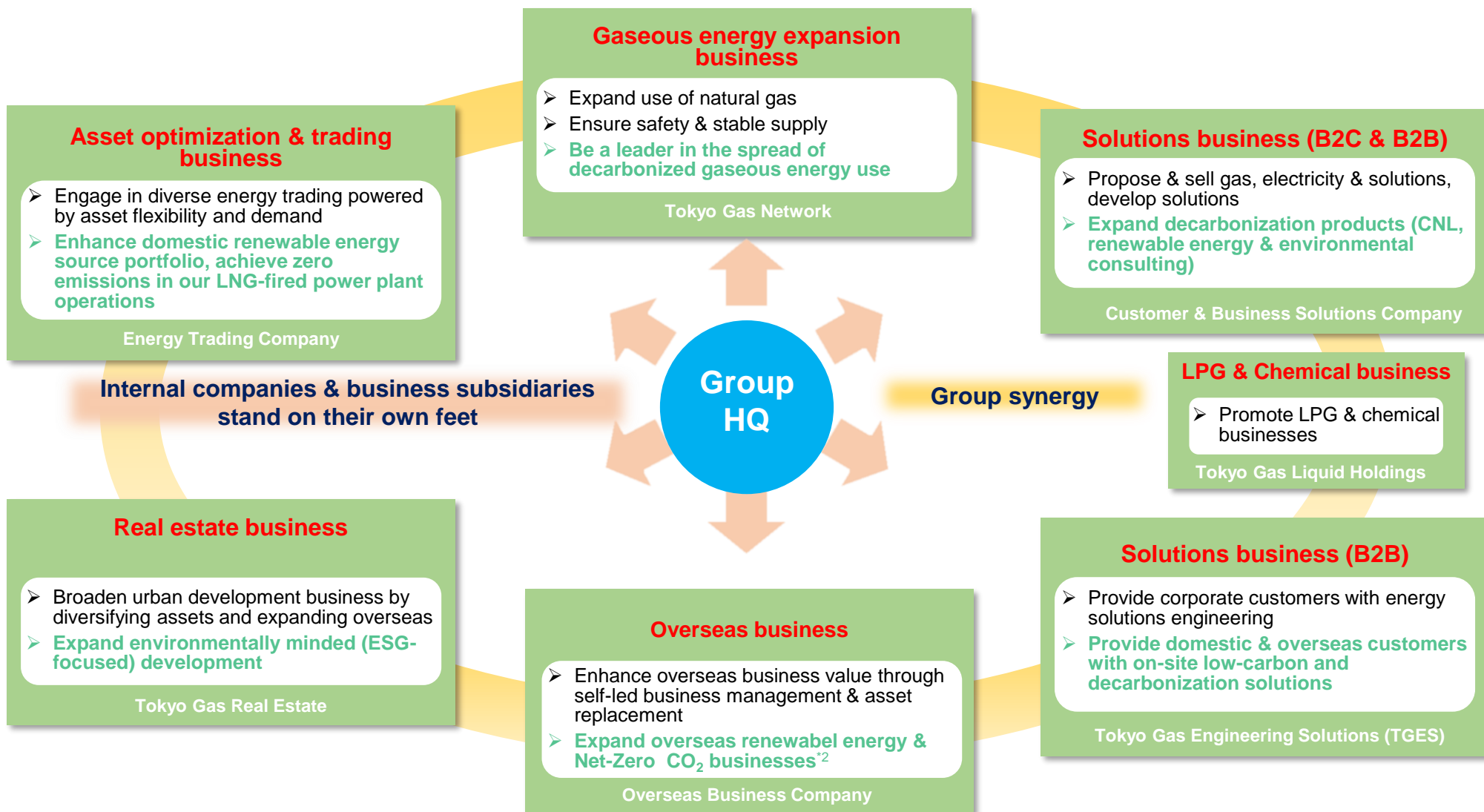
- ✓ Support for urban development via district heating & cooling projects and power distribution projects

Packaged offering of optimal solutions to customers for decarbonization, factory labor-saving, etc.

Contributing to appealing urban development, improvement of environmental sustainability, and other solutions for community social challenges

Transitioning to a holdings group structure

- We will **transition to a group structure** where internal companies (quasi branch companies) and business subsidiaries will **stand on their own feet** and Independently grow as they engage with their markets and customers
- The **internal companies and business subsidiaries^{*1}** will be **given greater discretion** in order to realize agile decision-making, and we will **pursue group synergy** through collaboration within the Group



*1: Organizational format and names are tentative.

*2: Hydrogen, afforestation, CCS, renewable gas, etc.

Group human resource reforms

- In conjunction with the shift to a holdings group structure, we will **transform our human resource system to one that encourages challenge-seeking and diversity**, so as to strengthen our internal companies & business subsidiaries



Cost structure reforms & DX

- Strengthen competitiveness by implementing effective **cost structure reforms, business process re-engineering (BPR), DX & other** approaches from an early stage

Expand BPR initiatives across the Group to achieve enormous reduction in workload

Carry out group-wide DX talent training and advance digitalization-driven reforms in domains from service provision to internal processes

Indirect costs

- ✓ Cut indirect costs by reassigning staff to growth areas
- ✓ Reduce rent by using free-address environments and optimizing office layout
- ✓ Use data analysis to achieve effective & efficient fuel management of company vehicles

DX

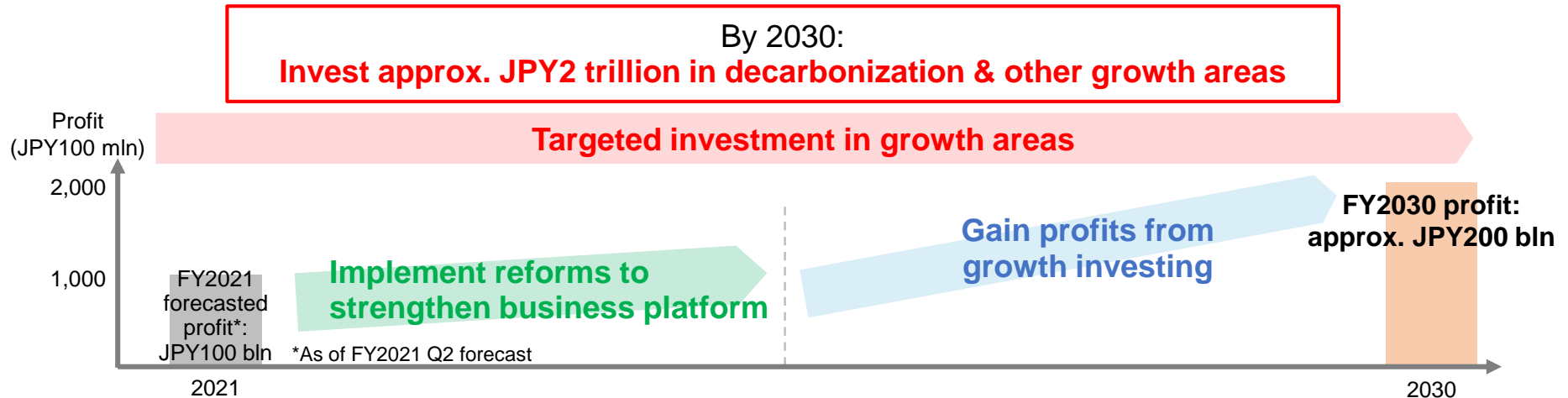
- ✓ Streamline meter reading and related processes by installing smart meters
- ✓ Streamline field operations with process/work information-sharing tools
- ✓ Use drones & robots to automate & streamline inspection

Service-related

- ✓ Expand range of online procedures for greater convenience
- ✓ Redesign services for greater eco-friendliness and digitalization (issuance of bill payment forms & meter reading slips)
- ✓ Reduce paper use in work processes

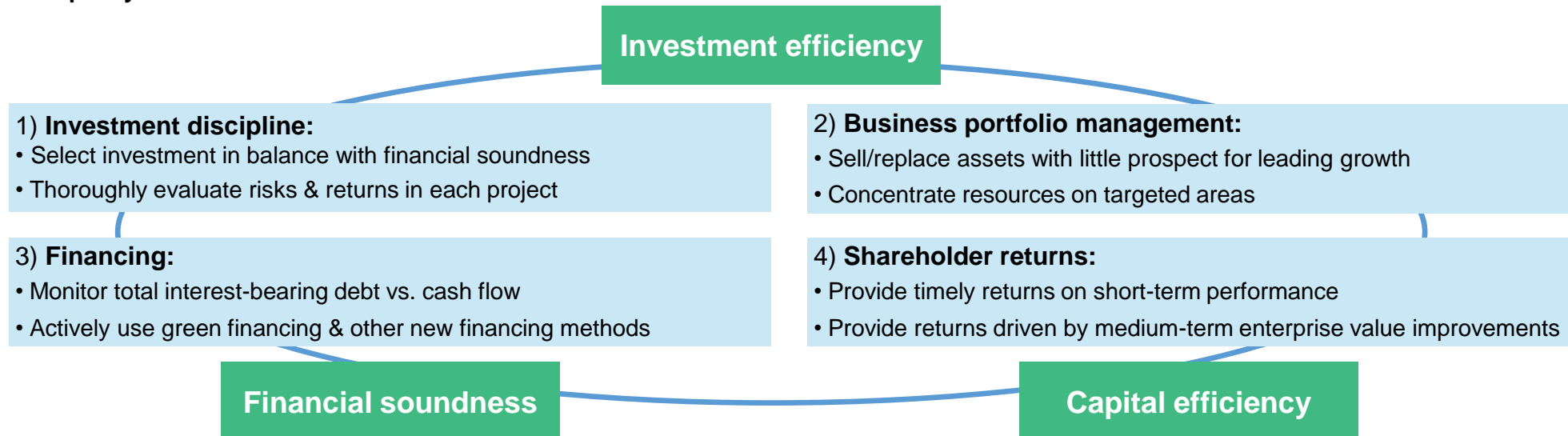
5. Targeted investment in growth areas

- Shift investment ratio to decarbonization & other growth areas, and actively inject them with cash flow (prior investments in decarbonization + active investment in other growth areas)
- Strengthen business platform by implementing reforms in first half of 2020s , achieve profit growth from investments in the second half



6. Financial strategy supporting investment

- Support growth investing by seeking to enhance investment/capital efficiency and using cash flow management to ensure investment capacity



Part I: Profile

1. Compass Action: Overview
2. Responsibly lead the transition with gaseous & renewable energy
 - Roadmap for transitioning to carbon neutrality
 - Sophisticated use of natural gas: Transitioning from low-carbon to decarbonized
 - Decarbonizing gas: Building a carbon-neutral methane value chain
 - Decarbonizing electricity: Building a renewable energy value chain
3. Accelerate co-creation via both digital transformation & strengthening of face-to-face engagement
 - Digital transformation & strengthening of last-mile services (B2C)
 - Digital & face-to-face solutions (B2B)
4. Improve each business's earning power and resilience to change
 - Transitioning to a holdings group structure
 - Group human resource reforms
 - Cost structure reforms & DX
5. Targeted investment in growth areas
6. Financial strategy supporting investment

Part II: Close-up

- Core strategies & concrete actions for each business

Reference: Progress status of key actions toward achieving Compass 2030 (past 12 months)

Asset optimization & trading business

(Energy Trading Company)

Growth vision

Asset optimization & trading business that creates value via asset optimization & diverse trading

Focuses of change

Value transformation: Leverage asset flexibility to maximize energy value, expand trading & build platform

Business model transformation: Establish a model for monetizing market volatility

Our Group's strengths

- ✓ Abundant LNG-related assets, trading volume & management capabilities
- ✓ Electricity business scale (generation & retail), trading platform

Expanded trading

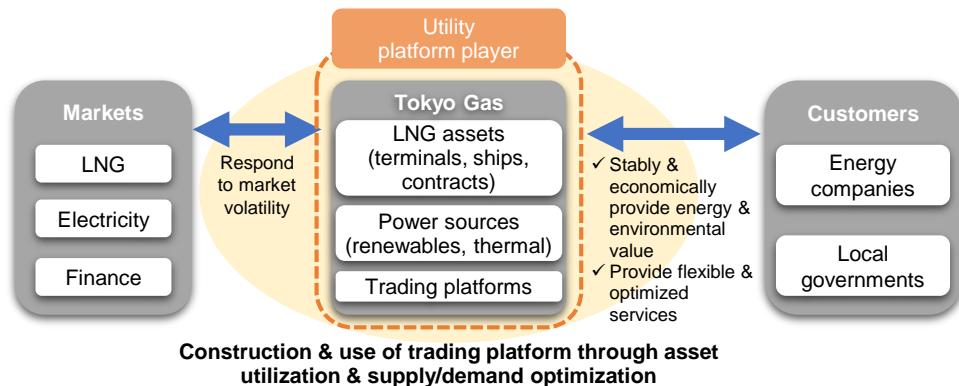
- ✓ Expand LNG trading with domestic/international players, including LNG procurement portfolio & financial trading
- ✓ Increase gas & electricity wholesaling to gas companies, local governments, etc., offer low-carbon & decarbonization solutions

Greater flexibility

- ✓ Flexibly utilize our LNG-related assets (terminals, LNG vessels, contracts, etc.), and increase flexibility through external partnerships
- ✓ Expand scale and flexibility of power source portfolio, especially for renewable power sources & balancing power sources (gas-fired power plants, fuel cell, etc.)

Sophisticated risk management

- ✓ Flexibly & quickly trade in LNG, electricity, and environmental value in step with institutional & market trends, and build risk management system



Gaseous energy expansion business

(Tokyo Gas Network)

15

Growth vision

Gaseous energy expansion business that cultivates demand

Focuses of change

Business transformation: Expand value-added businesses and offer low-carbon & decarbonization solutions using gaseous energy

Platform transformation: Achieve efficient & sophisticated safety by promoting DX & BPR

Our Group's strengths

- ✓ Many years of experience in safe, stable supply
- ✓ Ties with customers & communities

Expanded use of gaseous energy

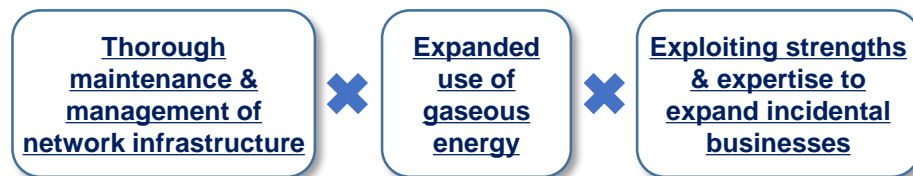
- ✓ Actively recruit city gas customers, contribute to CO₂ emissions reduction at customer sites
- ✓ Transport carbon-neutral methane (in future)

Expansion of value added businesses

- ✓ Provide services leveraging smart meter center system (remote operation & monitoring of smart meters)
- ✓ Provide disaster prevention solutions (disaster prevention mapping system, disaster response operations support service, building damage forecasting service)

Ensuring safe & stable supply, promotion of DX & BPR

- ✓ Realize remote meter reading to accommodate installation of smart meters, and remote valve opening/closing
- ✓ Pursue radical DX & BPR premised on guarantee of appropriate level of safety



Solutions business (B2C)

(Customer & Business Solutions Company)

Growth vision

Solutions business that offers energy services nationwide

Focuses of change

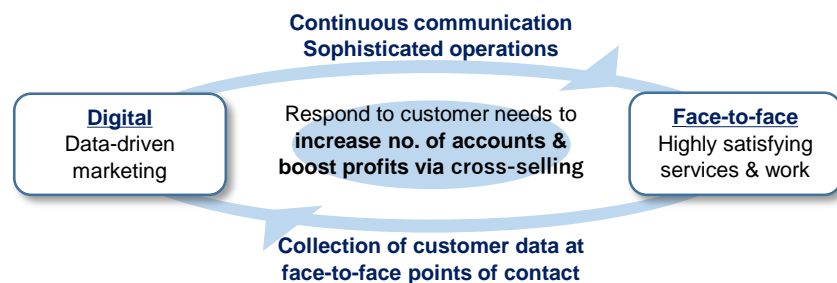
Sales transformation: Expand no. of customer accounts nationwide through digital and face-to-face channels
Structural transformation: Boldly reform cost structure and realign sales organization

Our Group's strengths

- ✓ Face-to-face channels for supporting the last mile
- ✓ Digital marketing expertise of TG Octopus Energy

DX + last-mile service expansion

- ✓ Increase customer base through sophisticated one-to-one digital marketing
- ✓ Expand last-mile services (plumbing repairs, housecleaning, air conditioning & electrical equipment repair, etc.)



Business structure reforms (cost structure reforms & realignment of sales organization)

- ✓ Boldly reform cost structure in ways not dependent on how work has always been done
- ✓ Establish total equipment service company for residential customers, expand product & engineering solutions

Solutions business (B2B)

(Customer & Business Solutions Company, TGES)

16

Growth vision

All-in-one B2B solutions business that provides energy, solutions, engineering

Focuses of change

Sales transformation: Nationwide/global deployment of all-in-one solutions
Domain transformation: Expand engineering capabilities to the realm of renewable energy

Our Group's strengths

- ✓ Deep bonds with customers through energy services
- ✓ Ability to propose user-centric solutions

Expansion of digital services & environmental products

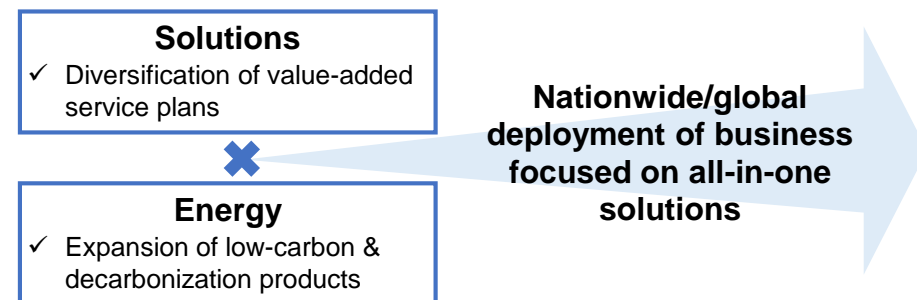
- ✓ Expand selection of digitally driven solutions (AI-enhanced efficient energy service, central system for monitoring customer equipment, etc.)
- ✓ Broaden low-carbon & decarbonization solutions (responding to customer needs with CNL, renewable power sources, CCU, etc.)

Expansion of engineering services to renewable energy

- ✓ Expand LNG-focused engineering services to the realm of renewable energy
- ✓ Offer efficient O&M services using digital tools

Nationwide/global all-in-one solutions (sales organization realignment)

- ✓ Integrate into TGES the B2B sales organizations split into gas/electricity sales (Tokyo Gas) and solutions sales (TGES)
- ✓ Offer all-in-one solutions services that respond to domestic/global customer needs



Overseas business (Overseas Business Company)

Growth vision

Leading value-adding overseas business that directly operates & grows businesses

Focuses of change

Investment transformation: Investment focused on growth areas where we can lead in value adding
Portfolio transformation: Improve capital efficiency by replacing assets

Our Group's strengths

- ✓ Ability to stably operate businesses
- ✓ LNG related expertise

Resource development business

- ✓ Utilize shale gas development/production subsidiary in US to expand assets in the surrounding mining areas, and grow them into a revenue base

LNG infrastructure business

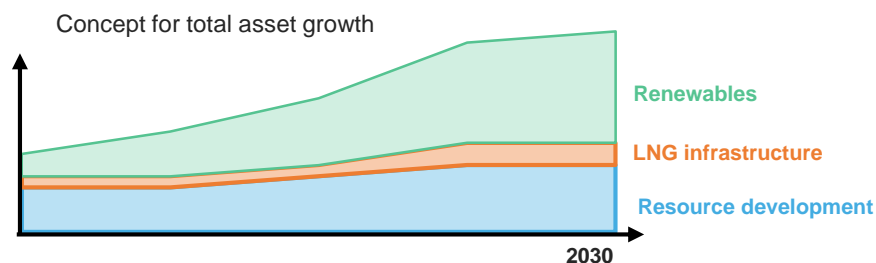
- ✓ Expand into growth markets in Asia by leveraging LNG trading experience and value enhancement expertise, including infrastructure construction & operation

Renewable energy & Net-Zero CO₂ business

- ✓ Increase renewable energy investments to grow toward new revenue sources, and fully enter the Net-Zero CO₂ business
- ✓ Expand into Asia & Europe using experience in development, construction, operation, and electricity sales in North America

Replacement of overseas assets

- ✓ Boost profitability & capital efficiency through asset replacement (portfolio realignment)



Real estate business (Tokyo Gas Real Estate)

17

Growth vision

ESG-focused real estate development business incorporating energy & environmental expertise

Focuses of change

Business model transformation: Evolve toward ESG-focused development & circular business model
Target transformation: Expand asset types and areas

Our Group's strengths

- ✓ Ownership of high-quality land holdings in the Tokyo metro area
- ✓ Synergy achieved by leveraging the Group's expertise

ESG-focused development

- ✓ Engage in highly value-added ESG-focused development, including leveraging our Group's wide range of services to introduce renewable energy use and provide optimized energy management

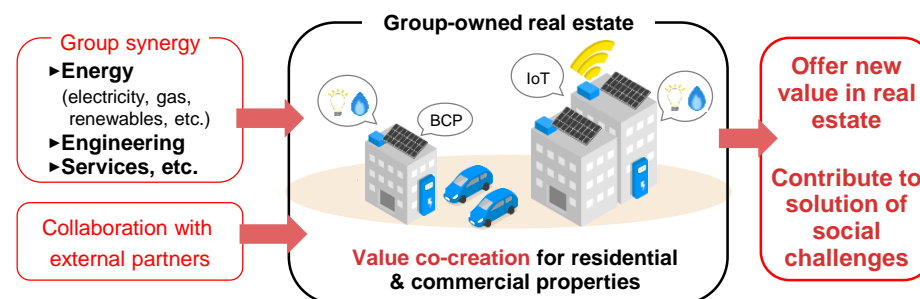
Circular model

- ✓ Establish a circular model to increase the value of real estate assets acquired from outside and developed through our Group's synergy and to feed gains on asset development & sales to the next investment

Asset & area expansion

- ✓ Broaden the types of assets operated in the Tokyo metro area (distribution, etc.) and expand business overseas by utilizing our overseas business networks.

Concept for ESG-focused real estate development business



New businesses

Growth vision

Establish new businesses that solve social challenges by leveraging our Group's strengths & digital technologies

Focuses of change

- ✓ Cultivate new businesses by combining asset-driven and business model-driven enterprises
- ✓ Accelerate new business development in areas that promise market scale/growth, where we can leverage our Group's strengths

Our Group's strengths

- ✓ Tokyo metro area is customer base
- ✓ Our data resources and land holdings

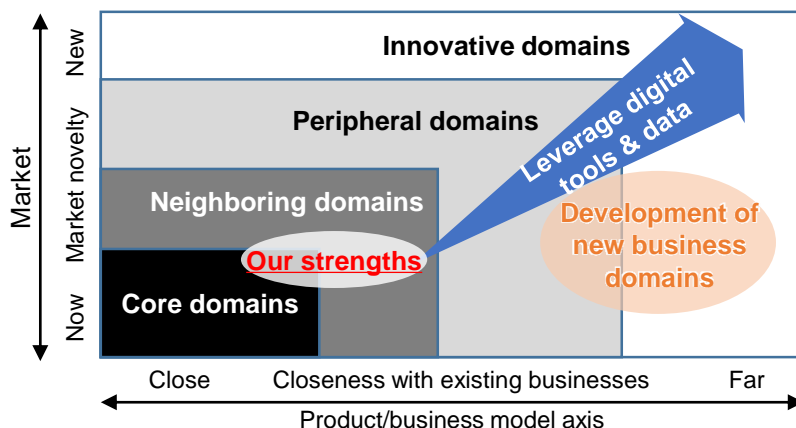
Example of new business

EV charging service for housing complexes



- ✓ Service launch in November 2021
- ✓ We will implement individualized management of charging service use via remote control units, QR codes, smartphone apps, etc.
- ✓ Dedicated chargers are installed at points such as parking spaces contracted by housing complex residents to create a convenient charging environment free of wait times and the need to move one's vehicle
- ✓ The business utilizes the system platform of Ubiden (a startup that shares a capital/business alliance with Tokyo Gas)

Business domain concept



Technological development (decarbonization)

Growth vision

Utilize existing & new technologies to **acquire & commercialize core technologies**

Focuses of change

- ✓ Newly acquire not only technologies that utilize energy, but also ones that produce energy
- ✓ Create new strengths by combining our accumulated technologies/expertise with new AI & data tools

Our Group's strengths

- ✓ Core technologies built up in city gas business
- ✓ Domestic & overseas R&D networks

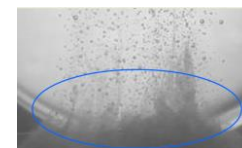
Acquisition of new core technologies

Decarbonization technologies

- ✓ Develop low-cost hydrogen production systems
- ✓ Develop innovative methanation technologies
- ✓ Develop of floating offshore wind power technologies
- ✓ Develop low-carbon/decarbonized combustion technologies (development of hydrogen combustion-type continuous combustion furnace; optimization of combustion equipment diagnostics/control)
- ✓ Store CO₂ underground using microbubbles
- ✓ Develop on-site CCU technology for producing potassium carbonate using CO₂ from city gas equipment; develop CO₂-absorbing concrete manufacturing technology



Hydrogen combustion-type continuous combustion furnace

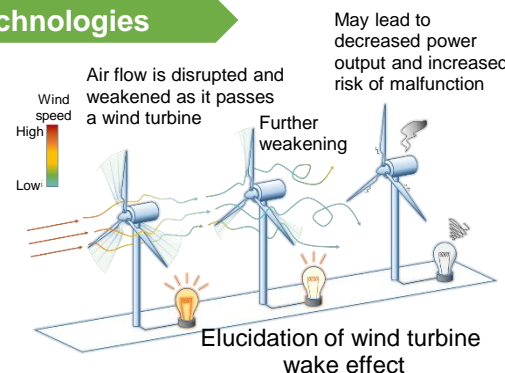


Microbubbles

Repurposing of existing core technologies

O&M cost rationalization technologies

- ✓ Repurpose existing core technologies built up in city gas business, including fluid, material, earthquake resistance, and non-destructive testing technologies
- ✓ Develop technologies for radically rationalizing the O&M costs of renewable energy (solar, wind, etc.) systems, LNG terminals, etc.



1	Lead transition to Net-Zero CO ₂	Development/commercialization of new technologies through open innovation & other approaches
	<div>Sophisticated use of natural gas</div> <div>CCUS</div> <div>CNL</div>	<ul style="list-style-type: none">✓ Launch of CO₂-absorbing concrete production that is the world's first to use CO₂ from city gas equipment (Jul. 2021)✓ Japan's first potassium carbonate production system to use CO₂ from city gas equipment (Sep. 2021)✓ Introduction of carbon-neutral city gas in Marunouchi district, the largest project of its kind in Japan (Oct. 2021)
	<div>Decarbonization of gas & electricity</div> <div>Hydrogen & methanation</div> <div>Renewable energy</div>	<ul style="list-style-type: none">✓ Tokyo Gas & Screen signed agreement to jointly develop water electrolysis cell stack toward low-cost green hydrogen production (May 2021)✓ Start of methanation demonstration in FY2021 (Jul. 2021)✓ Start of feasibility study toward creation of carbon-neutral methane supply chain with Petronas and with Sumitomo Corporation/with Mitsubishi Corporation (Nov. 2021)✓ Advancement of offshore wind power project (capacity: approx. 160,000 kW) in the Kashima Coastal Industrial Zone (Apr. 2021)✓ Launch of Sasutena Denki electricity rate plan based on essentially 100% renewable energy (Jun. 2021)✓ Start of commercial operation of mega solar farm in Iwakuni, Yamaguchi Prefecture (Jul. 2021)✓ Partial commencement of operation of Aktina Solar Project (150 MW) in the US (Aug. 2021)✓ Joint implementation of Sakaide biomass power project (Oct. 2021)✓ Power generation system at Sodegaura Power Plant (formerly Tokyo Gas Baypower) was upgraded with gas engines to serve as a source of balancing power for renewable energy (scheduled to go into operation in 2024)
2	Establish a value co-creation ecosystem	Diverse service combinations for offering solutions for customer lifestyles and communities
	<div>B2C</div> <div>Digital</div> <div>Last mile</div>	<ul style="list-style-type: none">✓ Launch of strategic partnership with Octopus Energy (UK) and establishment of TG Octopus Energy (Dec. 2020)✓ Start of demonstration testing of demand response service for residences (Jul. 2021)✓ Commencement of EVrest EV charging service for housing complexes (Nov. 2021)✓ Start of Tokyo Gas housecleaning service (May 2021)✓ Launch of fixed-rate service for plumbing & electricity repairs (Oct. 2021)
	<div>B2B</div> <div>Community challenge solutions</div> <div>Service expansion</div> <div>Smart energy</div>	<ul style="list-style-type: none">✓ Project for introducing renewable energy, etc. at 65 public elementary & middle schools in Yokohama (Mar. 2021)✓ Establishment of Utsunomiya Light & Power Co., Inc. (Jul. 2021)✓ Signing of comprehensive partnership agreement with Hadano City and Hatano Gas to promote carbon-neutral urban development (Nov. 2021)✓ Establishment of basic agreement with JT Group to take over its software business, which holds the top share of its market segment in Japan (Jul. 2021)✓ Formation of business alliance agreement with the Kansai Electric Power Co., Inc. for VPP business using decentralized energy resources (Nov. 2021)✓ Establishment of Tokyo Gas Nomura Real Estate Energy Co., Ltd. for supplying energy to the Shibaura 1-Chome Project (Apr. 2021)
3	Transform the LNG value chain	Implementation of cost-cutting measures and BPR , and transformation of organization for carrying out governance reforms and improving earning power
	Business structure & platform reforms	<ul style="list-style-type: none">✓ Cost reforms: Radical redesign of processes & systems through procurement reforms & BPR✓ DX: Streamlining of processes by using AI/data-driven tools for forecasting and optimization; enhancement of customer convenience, including by offering services online✓ Organization: Transition to a company with a nominating committee, etc. (Jun. 2021)

