



PETROLEUM & CHEMICALS SOLUTION GROUP

OUR VISION

Against a background of issues including climate change and marine plastics, the importance of transitioning to a low-carbon/decarbonized society and of reducing environmental footprints is growing day by day. Contributing to the achievement of a low-carbon/decarbonized society while steadily supplying the petroleum products and chemical materials indispensable to society and people's lives is a major theme that our Group has identified. In the fields of energy and materials, we aim to be a group that contributes to solving social issues through the conception and execution of business that is accompanied by environmental and societal value as well as economic value.

Osamu Takeuchi

Executive Vice President
Group CEO, Petroleum & Chemicals
Solution Group

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Petroleum & Chemicals Solution Group Organization



Risks and Opportunities in Light of Changes in the External Environment

Risks	Opportunities
<ul style="list-style-type: none"> Structural changes in the energy industry and transition to alternative fuels against the backdrop of climate change issues Decrease in the market value of fossil-derived chemical materials and a transition to substitute materials 	<ul style="list-style-type: none"> Progress in the utilization of fuel ammonia and hydrogen in a low-carbon/decarbonized society Low-carbon in existing chemical materials production and expansion of the recycling business Growth in new chemical materials markets using bio-derived materials and CO₂ as raw materials

Strengths of the Petroleum & Chemicals Solution Group

- Broad customer portfolio, industry presence, and market intelligence gained through trading and manufacturing businesses
- Conception skills and execution skills for next-generation fuels and environmentally considerate chemical material businesses, aimed at creating a low-carbon/decarbonized society
- Capability to construct a fuel ammonia business based on a long track record in electric power fuel supply and operational experience in the ammonia manufacturing business

Elements of the Midterm Corporate Strategy 2021

We position the face-to-face industry issues of adaptation to next-generation energy (EX: energy transformation) and conversion to reduced-environmental-footprint chemical materials having functionality and stable supply capacity equivalent to existing products (MX: material transformation) as top-priority themes for our Group. From the standpoints of EX and MX, we will undertake strengthening and conversion of our core businesses, will conceive and execute new businesses, and will work toward quantitative and qualitative improvement of revenues.

Progress for the fiscal year ended March 31, 2021

- With regard to EX, we have positioned ammonia, which does not emit CO₂ during combustion, as a promising candidate for next-generation energy. We are launching concrete efforts to realize our business concepts, including ammonia supply chain demonstration projects and CCS surveys.
- With regard to MX, we are working to conceive and execute chemical recycling businesses as well as obtain low-carbon in existing products, biochemical businesses and carbon recycling businesses, while discerning technical and economic issues and timelines.

EQUITY IN EARNINGS FROM MAJOR GROUP COMPANIES

(Unit: billions of yen)

	Ownership (%)	2017/3	2018/3	2019/3	2020/3	2021/3
1 Astomos Energy Corporation	49.00	1.7	3.0	-0.8	1.1	1.6
2 SPDC Ltd.	33.34	8.9	12.0	11.8	2.7	1.1
3 Mitsubishi Corporation Energy Co., Ltd.*	100.00	2.4	2.8	2.0	2.9	6.9
4 Mitsubishi Shoji Chemical Corporation	100.00	1.3	1.6	1.7	1.4	1.3
5 Mitsubishi Corporation Plastics Ltd.	100.00	1.9	2.5	3.0	2.6	2.6

*Name changed from MITSUBISHI SHOJI SEKIYU, CO., LTD. from the fiscal year ended March 31, 2016. The figures exclude the other Business Groups' equity in earnings (fiscal year ended March 31, 2020: -0.3 billion yen; fiscal year ended March 31, 2021: 0.1 billion yen).
Note: Equity in earnings of affiliated companies at each company listed above is also included.

BUSINESS OVERVIEW OF THE PETROLEUM & CHEMICALS SOLUTION GROUP

Fuel Ammonia Business

We will consider and develop a fuel ammonia business aimed at creating a low-carbon/decarbonized society. Ammonia is attracting attention as a next-generation clean energy source that does not emit CO₂ during combustion. As a first step, we will accelerate efforts related to the production, transport, and storage of blue ammonia, manufactured through the combination of fossil resource-based conventional production methods with carbon capture and storage (CCS) and enhanced oil recovery (EOR). As the second step, we will also consider the societal implementation of ammonia and hydrogen as well as business development of green ammonia based on renewable energy.



Chemical Recycling Business (Renewable PET Materials Production Business)

We will enter the chemical recycling business through the acquisition of a third-party allotment of shares (MC's shareholding from 3.85% to 34%) in Thai Shinkong Industry Corporation Ltd. (TSIC), which produces and sells PET resins for beverage bottles in Thailand. PET is a mono-material boasting excellent transparency and barrier properties. Highly recyclable due to well-established collection and recycling facilities, PET has a wide range of applications, including in both beverage and food containers as well as textiles used in clothing. In response to greater environmental awareness about plastics and demands for a transition to circular economies worldwide, TSIC is expanding PET resin production capacity and also plans to produce recycled PET resins by adopting chemical recycling technologies, with commercial production scheduled to begin in the first half of 2022.

We will deploy human resources to management positions in TSIC to contribute to the company's business management and will help realize a circular economy through sales of recycled PET resin that faces growing market demand.



CGCL (Methanol Production and Sales Business)

Caribbean Gas Chemical Limited (CGCL), established in 2013 in Trinidad and Tobago, completed construction in June 2020, and started commercial operation in December 2020. The company has production capabilities with the ability to produce 1 million tons of methanol and 20 thousand tons of dimethyl ether each year. Methanol is used in a wide range of applications, including adhesives, agricultural chemicals, coatings, synthetic resins, and raw materials for synthetic fibers, and faces growing demand worldwide. It can be manufactured using CO₂ as a raw material, and in recent years has become a promising raw material for environmentally considerate fuels and chemical materials.

Engaging in stable operation with experienced business partners, we will establish business dominance through its sales capabilities in global markets.

