

Manufactured Capital

The Idemitsu Group produces and globally supplies petroleum, lubricants, bitumen (high performance asphalt), basic chemicals, advanced materials & performance chemicals, CIS thin-film solar cells, electronic materials, and agri-bio products. In addition, the

total generating capacity of our various power plants, which include solar, geothermal, biomass, wind, and LNG thermal power facilities, has grown to 1.2GW, enabling us to support people's day-to-day lives.

Petroleum Refining

As a result of the business integration of Idemitsu and Showa Shell, we have achieved an even more efficient supply of petroleum products than in the past. These efforts include the interchange of products and semi-refined products to optimize production, the development of best practices for energy conservation and improvement of refining margins, and the reduction of procurement costs through the promotion of joint procurement. In addition to implementing optimal area-specific strategies in Hokkaido, Keihin/Keiyo, Chukyo, and West Japan, we will implement management strategies to further strengthen our competitiveness by complying with the IMO (International Maritime Organization) regulations on the sulfur content of marine fuel oil, expanding the use of fuel oil fractions in petrochemical products, and increasing export capacity. The entire Group is also coming together to reform the workstyles of the people who support our workplace.

It has been one year since the Nghi Son Refinery in Vietnam commenced commercial operations and achieved stable operation.



Chiba Complex

Oil Development

We promote exploration, development, and production projects for oil and gas, mainly in Norway and Southeast Asia, including Vietnam.

In addition, we are working to secure oil and gas reserves from a medium- to long-term perspective as we maintain and expand production volumes by conducting exploration activities in Norway, Southeast Asia, and other core oil-producing areas.



Illustration of renewable energy being supplied to an offshore oil field. We are participating in joint businesses with Equinor and other companies.

■ Group Refineries in Japan (As of the end of March, 2020)

Name	Location	Crude oil processing capacity (thousand barrels per day)
Hokkaido Refinery	Tomakomai City, Hokkaido	150
Chiba Complex	Ichihara City, Chiba Prefecture	190
Aichi Refinery	Chita City, Aichi Prefecture	160
Yokkaichi Refinery (Showa Yokkaichi Sekiyu)	Yokkaichi City, Mie Prefecture	255
Keihin Refinery (TOA Oil)	Kawasaki City, Kanagawa Prefecture	70
Yamaguchi Refinery (Seibu Oil)	Sanyo-Onoda City, Yamaguchi Prefecture	120
Total		945

■ Group Refineries Overseas (As of the end of March, 2020)

Name	Location	Crude oil processing capacity (thousand barrels per day)
Nghi Son Refinery	Thanh Hóa, Vietnam	200
Total		200

Coal Mine Operations

We own coal mines in Australia and Indonesia, and have built an integrated supply chain encompassing production, transportation, and marketing. We are promoting a solution business with the aim of lowering carbon emissions and achieving a stable supply of coal that is highly economical to customers in Asia, especially Japan.



Boggabri Coal Mine (Australia)

Manufacture of Petrochemical Products

Basic chemicals

We are working to strengthen our cost competitiveness by strengthening cooperation with other companies and diversifying the raw materials handled at our industrial complexes in Chiba and Shunan as well as using highly efficient crackers. We are also working to improve profitability and ensure the efficient operation of equipment used in the oil refining and petrochemicals value chain by integrating the operations of the fuel oil and petrochemical businesses.

■ Group Petrochemical Plants in Japan (As of the end of March, 2020)

Name	Location	Ethylene production capacity (thousand tons/year)
Chiba Complex	Ichihara City, Chiba Prefecture	374
Tokuyama Complex	Shunan City, Yamaguchi Prefecture	623
Total		997

■ Group Petrochemical Plants Overseas (As of the end of March, 2020)

Name	Location	Main product
Pasir Gudang Factory	Johor, Malaysia	Styrene monomer
Nghi Son Refinery	Thanh Hóa, Vietnam	Paraxylene



Tokuyama Complex

Advanced Materials & Performance Chemicals

As for advanced materials (such as engineering plastics and adhesives materials) and performance chemicals (such as derivatives and solvents), we have positioned vehicles, information and communications equipment, daily necessities, and intermediates for durable consumer products as growth markets, and will expand our business by providing solutions based on our own technologies. We will accelerate business growth by creating product synergies with other functional materials produced by the Group, such as lubricants, and by aggressively acquiring resources through collaboration with other fields and M&A.

We own production bases and supply products in Japan as well as overseas in Taiwan (polycarbonate and hydrogenated petroleum resin); Guangdong Province, China (plastic compounds); and Thailand (zipper tape). We plan to construct manufacturing equipment in the Pasir Gudang Factory in Malaysia for syndiotactic polystyrene (SPS), and commercial operations are slated to begin in the second half of 2022.

Manufacture of CIS Thin-Film Solar Modules

Our research and development related to solar power generation dates back more than 40 years to 1978. In 2007, we began commercial production of CIS thin-film solar modules using copper, indium, and selenium as the main components. CIS thin-film solar modules are now produced at the Kunitomi Plant of Solar Frontier K.K., which has one of the largest production capacities in the world.



Kunitomi Plant

Power Generation Facilities

Our total power generation capacity, including facilities in Japan and around the world run both by the Group and affiliated companies, comes to around 1.2GW.

Operations in Japan account for about 1.0GW of the total and include around 0.2GW from solar, geothermal, biomass, wind and other renewable energy sources.



Takigami Binary Power Plant

HIGHLIGHTS

Passing Down Technical Skills in Manufacturing Departments

We strive to pass down technical skills to young employees by placing instructors in departments that operate equipment, increasing the number of veteran employees (senior support employees), helping improve understanding of educational and training topics, and providing on-the-job training (OJT) at manufacturing sites.