

Paving the way for the future of Gas & Energy

Iwatani

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As those needed by society can prosper Making a difference as only Iwatani can

Our goal is to preempt what society needs so that we can provide support for industry and people's everyday lives.

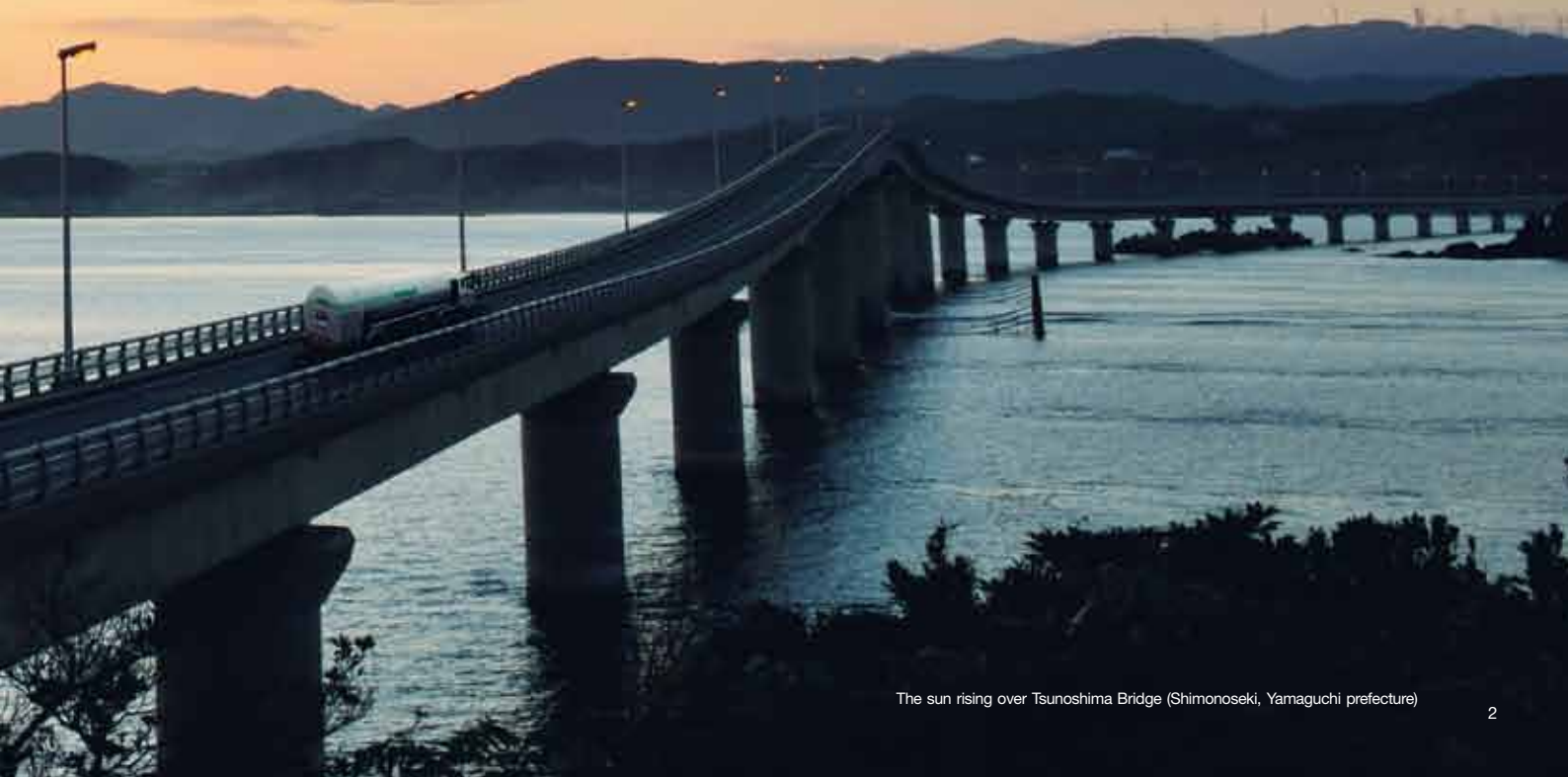
We try to make a difference to people and society through "Gas & Energy", resources that the earth has carefully nurtured for hundreds of millions of years. As a specialist in handling such irreplaceable resources, we have been engaging in a wide range of operations here at Iwatani ever since the company was first established in 1930, including lifestyle products, machinery, welding materials, electronic equipment, materials and food products as well as our core LPG, hydrogen and industrial gas operations.

Our driving force has always revolved around people, underpinned by our determination to be "needed by society".

We draw strength from individual capabilities and the trusting relationships and networks we have built up with our customers, and from the new ideas and challenges that they present.

We may continue to change with the times, but our mission remains the same; to provide new value and to actively seek out potential needs.

We will continue to grow into the sort of company that our customers want and need, as we do our utmost to create a brighter future for everyone.





Creating the future of technology together with customers



Iwatani R&D Center established as our new technology base (Amagasaki, Hyogo Prefecture)

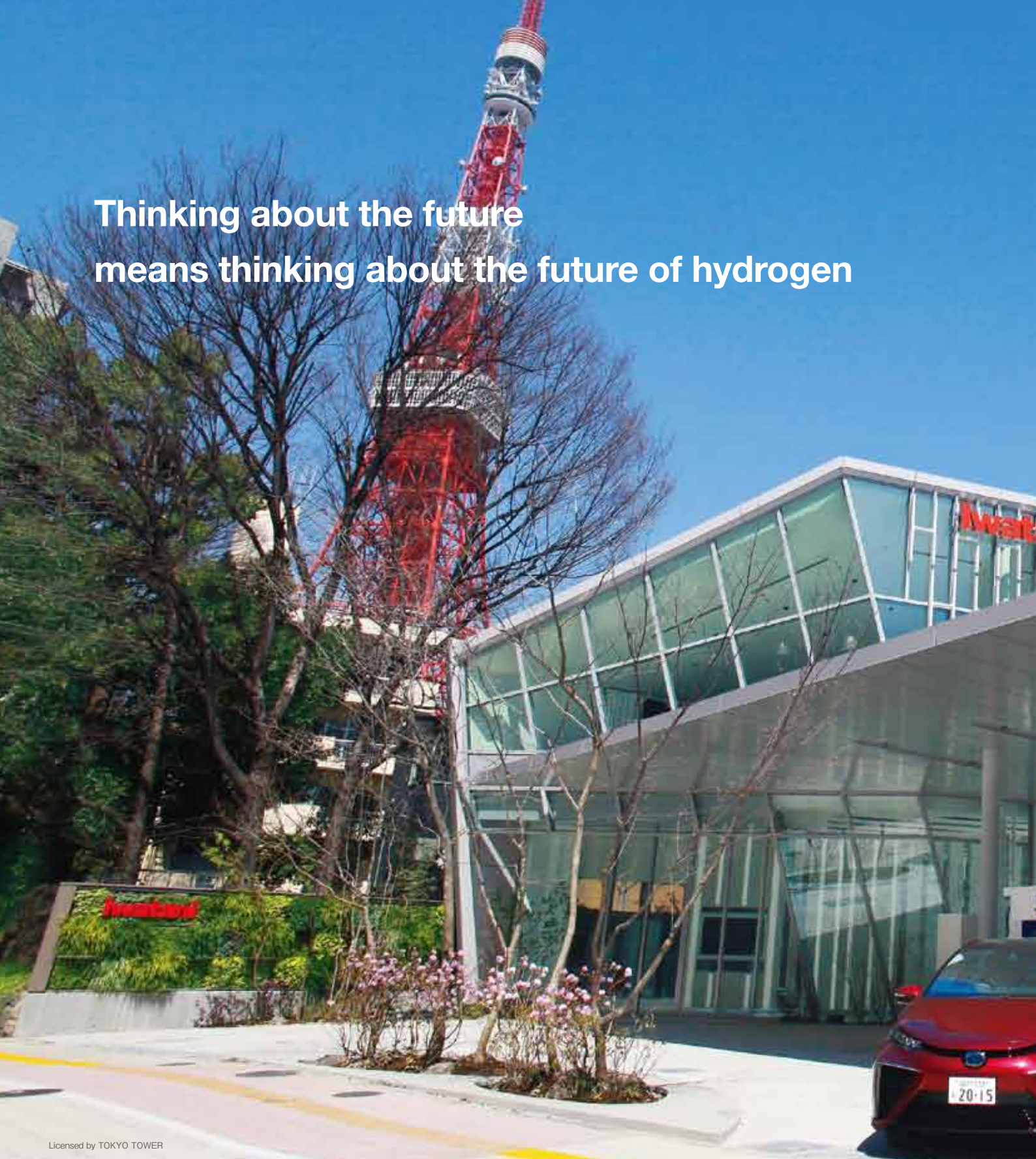
Applying the information power we possess as a trading company and our technological abilities developed over many years, in April 2013 we established Iwatani R&D Center as a new technology base for realizing the outstanding potential of Iwatani. Based on our accumulated gas technologies, this facility is newly equipped with a host of the highest performance analytical instruments and permits a range of testing environments.

We wish to create new value by linking between

the seeds of creation and existent needs, thereby contributing to society. We aim to make the facility an open laboratory, at which we not only independently implement development projects but also collaborate with a wide variety of companies and organizations- including our customers, business partners, universities, public research institutes, and administrative organs- to create new technologies and products. To this end, we have introduced a wide array of advanced analytical instruments and equipment that enable us

to work on the latest research issues. We will provide one-stop services ranging from joint research with customers to development of products that fulfill customer needs. We have also installed various demonstration functions, including a hydrogen station, to facilitate understanding of our original technologies. Iwatani R&D Center thus makes it possible to realize the future envisioned by Iwatani, including a hydrogen society, in easy-to-understand ways.

Thinking about the future
means thinking about the future of hydrogen



Licensed by TOKYO TOWER





Iwatani Hydrogen Refueling Station in Shibakouen as Japan's first hydrogen station with a showroom (Minato-ku, Tokyo)

We have focused our attention on latent needs for hydrogen since 1941. Iwatani has also taken the lead in developing applications for liquefied hydrogen. In December 2014, Toyota Motor Corporation released its MIRAI fuel cell vehicle on the market. As efforts accelerate to bring about a society that supports the use of hydrogen, we are working to build up the foundation of hydrogen infrastructure, such as by building 20 hydrogen stations nationwide. To this end, we have integrated the design and construction of hydrogen stations, and have strengthened our technological

and engineering structures. Beginning with Iwatani Hydrogen Station Amagasaki, Japan's first commercial hydrogen station which opened in July 2014, we are making steady progress in the construction of hydrogen stations in Japan's four major urban regions, including Fukuoka Prefecture and Tokyo, as well as in other areas across the country. In addition, we are working on the technological development of fuel cells for domestic use. At the same time, we have organized the Hydrogen Energy Forum, which has been held every year since 2006. The purpose of this forum

is to generate momentum that leads to the widespread use of hydrogen energy and provides a platform for building the necessary network. The forum also serves as a bridge between businesses, organizations, and individuals in hydrogen-related areas, working to bring them together and help create a hydrogen energy society. In addition, we organize hydrogen science workshops and other related events all over the country to promote the advantages and cleanliness of hydrogen to children, the future leaders who will play an important part in the next age.





Getting LPG to every corner of Japan Focusing on everyday life and society in general

An ENE-FARM system fitted to a two-family home (Ebina, Kanagawa prefecture)

Eager to make life easier for housewives struggling in the kitchen with fuels such as wood or coal, in 1953 Iwatani became the first company in Japan to start selling LPG on a nationwide scale. As we handle everything from importing gas to supplying individual households, we are committed to maintaining stable supplies and continually improving our security systems. The first stage of our supply structure depends on direct import contracts with gas producing countries. We then bring the gas over to Japan in

chartered tankers and stockpile it at one of our import terminals. The final stage is to supply individual households via our own LPG brand Marui Gas. In recent years, we have started to sell ENE-FARM household fuel cell systems, which extract hydrogen from LPG to generate electricity whilst at the same time using waste heat to provide hot water. We are also working with Marui Gas distributors to promote double-power ("W-power") systems, which offer the advantage of a decentralized power supply source in the

event of an emergency, as well as being good for your wallet as well as the environment. The fact that decentralized systems are so resilient in an emergency underlines just how reliable LPG services are. We have approximately 3,000 LPG Installation engineers and other gas experts signed up to our Marui Gas Emergency Taskforce meanwhile, and regularly conduct drills in partnership with fire departments and local fire, safety and disaster prevention officials, to make sure that we are ready for all eventualities.

A business domain spanning the globe
Iwatani continues to exceed expectations





The departure lounge at Kansai International Airport (Izumisano, Osaka prefecture)

Our business domain here at Iwatani spans the entire globe. Our procurement operations involve importing LPG from gas producing countries. We carefully coordinate the shipping routes used by our LPG carriers (approx. 40,000 tons), based on FOB (free on board) contracts with countries such as Saudi Arabia, the United Arab Emirates and Malaysia and charter contracts with shipping companies, and make countless adjustments to ensure that our operations are as cost effective and efficient as pos-

sible. Our operations also extend to materials, everyday and machinery-related products. We import Primus outdoor products from Sweden for instance, and peat moss (for conditioning soil) from Canada, Germany and Lithuania. In the US meanwhile, we export helium to Japan and sell products such as valves, minerals, burning tools, and portable gas cookers and canisters. In Australia, we operate on a manufacturing basis, as the only Japanese trading company with its own mineral sand manufac-

turer. We are increasingly focusing our attention on China too, and have built up a network of 40 individual sites in sectors such as industrial gas and materials, ranging from air separation and CO₂ gas to metal coatings. Including sales of products such as welding materials, welding robots and communication equipment, our domain here at Iwatani continues to expand in line with rapid economic growth in China and the rest of Asia, shifting the focus of our operations increasingly onto overseas markets.

To remain a company needed by society, we will contribute to the public good by striving to create new value.

Since the Iwatani Corporation was first founded in 1930, we have continued to develop into a comprehensive energy service provider, supporting a wide range of industries and underpinning people's everyday lives. At the core of our management is the notion, "Become a person needed by society, as those needed by society can prosper," a philosophy advocated by our founder Naoji Iwatani. Our approach to management is based on the philosophy that "As those needed by society can prosper". This concept was first set out by the company's founder Naoji Iwatani and is now widely accepted as the basis of corporate social responsibility (CSR). Throughout the company's history, we have always been eager to explore and take on new challenges, based on the understanding that our purpose is to fulfil the mission and roles that society expects of us.

In 1953, we became the first company in Japan to start selling LPG on a nationwide scale. Since then, our core LPG operations have helped to transform people's lives in Japan. We already help 3.1 million households around Japan maintain their day-to-day lifestyles by supplying them with LPG. Since the Great East Japan Earthquake in 2011, LPG has been attracting renewed interest as a disaster-resistant, decentralized energy source. We are also committed to developing unique technologies and accumulating expertise in the fields of LPG and industrial gas, based on the widely applicable concept of "Gas & Energy". Our aim is to contribute to the development of society across a wide range of areas, including machinery, welding materials, electronic equipment, materials and food products. We take our responsibility as a lifeline for both people and industry very seriously and will continue to focus on reinforcing and expanding our supply network in the future, so that customers throughout the country can use LPG and industrial gases with total confidence.

We also operate a number of businesses aimed at protecting the environment and helping to create a low carbon society, based on the slogan "A world where all enjoy true comfort -this is Iwatani's desire". Businesses include cogeneration, gas heat pumps (GHP), liquefied natural gas (LNG) and solar power generation. We are particularly committed to initiatives relating to hydrogen. Given the growing need to tackle urgent global issues

hydrogen is expected to lead the next generation as the ultimate clean energy source. We are already evolving from a society dependent on fossil fuels into a low carbon society in which CO₂ emissions are kept to a minimum. In the future, we are likely to evolve even further, into a hydrogen society in which hydrogen is the central energy source.

This is what we had in mind when we launched Japan's first commercial liquid hydrogen plant in 1978. Having established ourselves as Japan's leading hydrogen supplier, we have been conducting research and development ever since, with our sights set on the practical application of reformulated LPG fuel cells. We have also been working to improve our liquid hydrogen manufacturing plants and other parts of our infrastructure, and running trials on pure hydrogen fuel cells in conjunction with national and local governments.

As an energy service provider offering a safe, inexpensive and stable supply of hydrogen, suited to the location or format, we are determined to contribute to the creation of a hydrogen society in the future, as we move towards an era of mass production, mass transportation and mass consumption of hydrogen.

In April 2013, we established Iwatani R&D Center as a new technology base. Based on our accumulated gas technologies, this facility is newly equipped with a host of the highest performance analytical instruments and permits a range of testing environments. As an open laboratory, Iwatani R&D Center will respond to diverse customer needs and provide one-stop services using technologies.

As globalization, cross-border trade and advances in IT continue to transform the corporate landscape, we intend to focus even more on fulfilling our corporate social responsibilities in the future, through sustained business growth and measures such as reinforcing internal control and strictly enforcing compliance. As a company, we are determined to play an even more important role in society.

Here at the Iwatani Group, we will continue to offer new value to all of our customers, as well as our shareholders, suppliers, local communities and employees, so that we can continue to grow and develop as an evolving comprehensive energy service provider.



Chairman & CEO

Akiji Makino

President

Masao Nomura



**Giving people and industry what they need
Providing support from four different angles**

“Gas & Energy” are gifts from the earth.

Our unique technologies and sales network enable us to bring those precious resources together and deploy them across a wide range of areas from four different angles, so that they can be put to the best possible use.

Our goal is to provide people and society as a whole with what they need for tomorrow.

We aim to make those products as convenient and user friendly as possible too.

We precisely cater to customers’ needs in each area, in order to help them resolve their issues.

We want to help companies to develop and to help people to live their lives, as an ever-present partner in industry and technology.

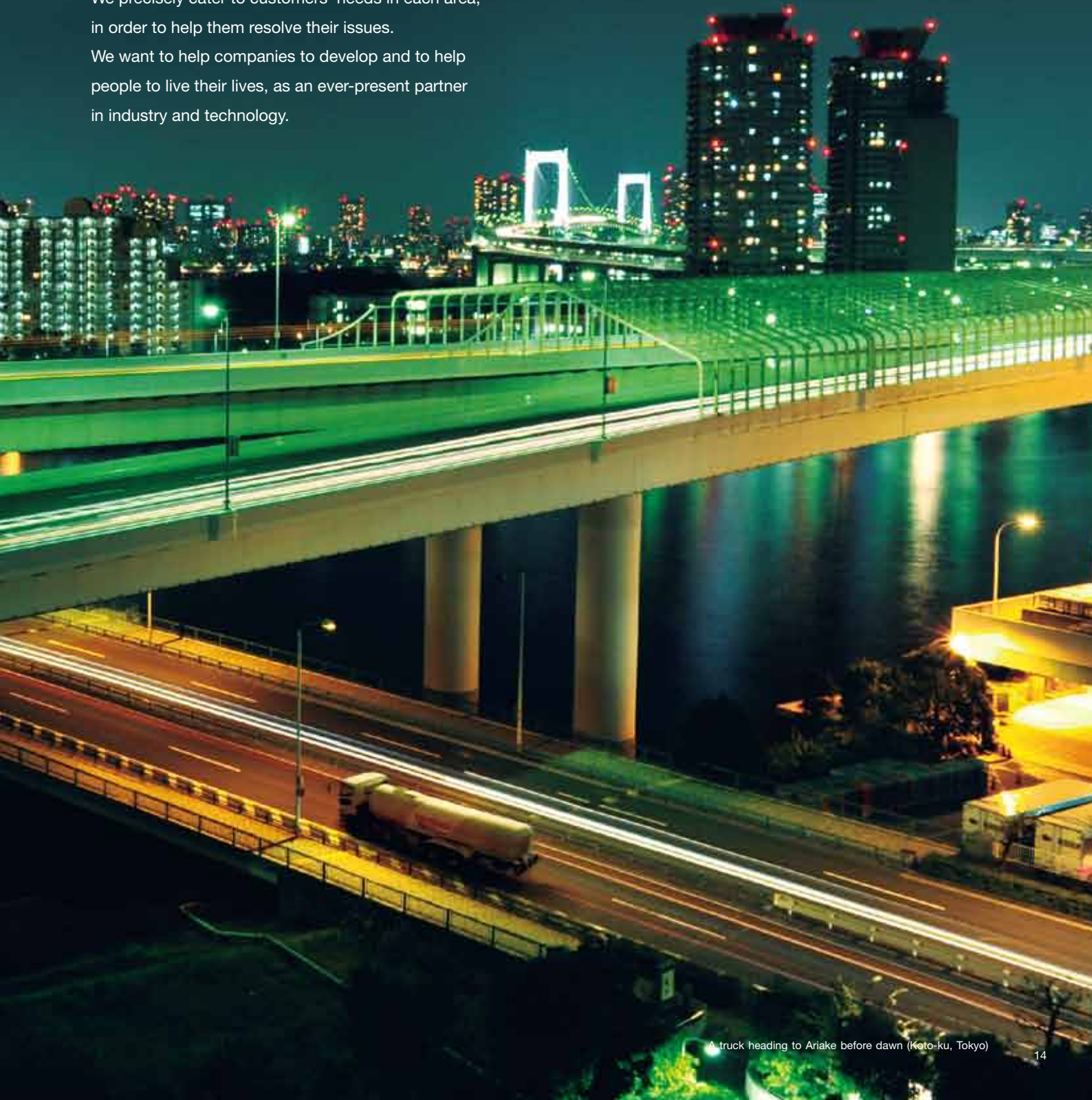


Energy

Industrial gas and machinery

Materials

Agri-bio and food



A truck heading to Ariake before dawn (Koto-ku, Tokyo)

Keeping an eye on lifestyles and society Identifying what people want

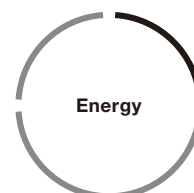
Our unique integrated network here at Iwatani,
covering every step of the way from import to delivery to households,
enables us to maintain stable supplies,
so that people can use LPG safely and securely.

We are also working to pave the way for new energy sources such as hydrogen.

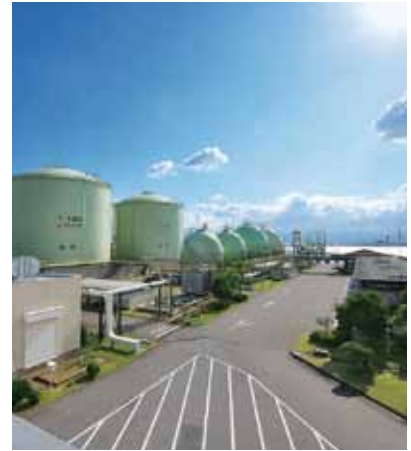


An LPG tanker docked at our Sakai LPG import terminal (Sakai, Osaka prefecture)

Energy



Providing an energy lifeline, all the way from gas producing countries



LPG (overseas imports)

In an effort to establish a strong supply structure for LPG, in 1980 we signed a direct import contract with Saudi Arabia so that we no longer had to go through the major oil companies. Having commenced imports in 1981, we have since expanded our import sources to include other major gas producing countries in the Middle East and Asia, such as the United Arab Emirates and Malaysia.

We have established a robust supply structure that is less susceptible to international unrest, and are now able to supply gas to domestic customers safely and securely using our own chartered carriers. We provide Japanese society with a stable supply of energy for an increasingly diverse range of needs, from household users to vehicle fuels and industrial gases.

LPG integration (domestic supplies)

As well as reliably importing LPG, we also operate a stockpiling and supply structure to provide domestic customers with LPG safely and efficiently, all the way from gas producing countries to their kitchen. Having established our Sakai LPG import terminal, we are now working to align and integrate secondary and tertiary terminals, in order to reinforce our network and effectively supply gas to households.



Everyday energy courtesy of Marui Gas

In the face of changing market conditions, from the days when propane gas was just taking off to the current era of lifestyle solutions, we changed the name of Iwatani's LPG brand from Marui Propane to Marui Gas in 1993, to mark 40 years of sales. Making the most of our network of 1,400 distributors, the largest network of its kind in Japan, we are in the process of reorienting our business from

supplies to solutions. We are working closely with local communities to identify their needs, with the aim of becoming consumers' energy source of choice, and currently supply 3.1 million households nationwide, from urban areas to outlying islands. We continue to provide people with gas safely and securely, to help improve their everyday lives.

Bulk supply

Our LPG bulk supply system streamlines the distribution process by directly recharging gas tanks from specialized tanker trucks fitted with pumps, thereby increasing convenience for our customers. We continue to install LPG systems in various different locations, from regular households to large-scale facilities.

Maintaining safety and security on a daily basis with environmentally-based technical capabilities



Proprietary safety standards

Ensuring safety has always been one of our main concerns here at Iwatani, ever since we started our business. We have distilled the considerable expertise that we have built up throughout the company over many years into the Iwatani Safety Spec (ISS), which acts as a safety management standard both within the company and for our customers.



Ensuring safe consumption of LPG

In 1987, we developed the Tele-Safe system, a 24-hour landline-based monitoring system designed to create an environment in which customers can use gas safely. A home terminal installed in the customer's home connects to a central computer control system via their telephone line, enabling the system to monitor for gas leaks or other issues such as prolonged usage of heating appliances.

The system is excellent at preventing household accidents from occurring, by contacting the customer and notifying the relevant distributor if it detects signs of an emergency. We are constantly working to improve reliability even further, while we keep our customers safe 24 hours a day, 365 days a year.

Safety and security

In 1969, we launched Mihari, Japan's first household gas leak detector. This evolved into the Triple Keibu system, which detects fires, incomplete combustion, and air leaks, in 2002 and again into Mappy Safe in 2010, with the addition of a security and disaster prevention system. We are always looking for new ways to keep our customers safe.



Double-power ("W-Power") generation

Double-power generation systems create clean energy that is good for your wallet as well as the environment. They combine ENE-FARM household fuel cells, which extract hydrogen from LPG to generate power and use the resulting waste heat to supply hot water or heating, with solar cells to generate solar power. This significantly improves household energy efficiency and

helps to cut peak power consumption, whilst at the same time drastically reducing annual CO₂ emissions. Together, ENE-FARM and solar power reduce CO₂ emissions by approximately 4.2 tons a year. For a typical household, this equates to an average reduction in emissions of roughly 80%.

Self-station α

Self-station α provides the necessary fuel supply infrastructure for LPG vehicles, which are one of the stars of the show when it comes to practical clean energy. Stations use a pump-free system that supplies LPG using steam pressure, making them a highly practical and space-saving option. They have a crucial role to play in promoting the widespread use of LPG vehicles.



Growing acclaim for decentralized energy

As well as being a disaster-resilient energy source, LPG is also receiving growing acclaim for its benefits as a decentralized energy source, as opposed to centralized systems operating via the power grid or gas pipes. Of the 106 supply facilities that we have around the country, we have reinforced filling stations on a priority basis, to act as backbone facilities that will still be capable

of shipping LPG in the event of a disaster. We have also installed an LPG-powered air conditioning system (GHP) at our Tokyo Head Office so that we can meet power saving requirements. Our aim is to cater to society's wide-ranging needs quickly and effectively.



High performance gas appliances

As well as being hard to stain and easy to clean, glass top stoves also save energy and offer outstanding performance. Our Eco-Jozu high-efficiency water heaters meanwhile provide excellent thermal efficiency and handle everything from under-floor heating to bathroom heaters and dryers. These are just some of the latest LPG appliances supplied by Iwatani, fully equipped with technologies that make life more convenient and comfortable.



Marui Mutti

Marui Mutti is a monthly newsletter delivered to households using Marui Gas all over Japan. In addition to information on fashion, food, the home and leisure activities, it also contains helpful hints on environmental issues, disaster preparedness and security. Our aim is to help customers build better lives for themselves, through two-way communication with our distributors.



Emergency LPG generators

Making the most of LPG's advantages as a disaster-resilient decentralized energy source, we supply LPG generators to provide essential power in case of emergency. Generators offer a solution for public facilities, quakeproof apartment buildings and other key facilities, to enable them to reliably maintain gas and electricity supplies in the event of a disaster.



Gas heat pump (GHP) air conditioning

GHP systems use gas engines to circulate refrigerant in order to provide efficient heating and cooling, whilst at the same time reducing power consumption. Our ECOWILL household cogeneration systems meanwhile use gas engines to generate power, whilst effectively reusing waste heat to supply hot water or heating. Saving and creating energy using LPG are two of our top priorities here at Iwatani.



Mobile children's emergency services

As part of our efforts to give something back to local communities on a day-to-day basis, we provide mobile children's emergency services. We want to make sure that all children in the local area are safe. That's why our sales and delivery vehicles do their bit to help prevent crime while out on business.

Creating a recycling society through new energy



LNG (liquefied natural gas)

Made by liquefying natural gas, LNG is a clean energy source with exceptionally low NOx (nitrogen oxide) and CO₂ emissions and is expected to become a key alternative to petroleum. We are working to establish the necessary structure to supply LNG safely and securely, including through eL-Energy Co. Inc., which we established as a joint venture with Kansai Electric Power Co. Inc.

Local LNG pipelines (city gas business)

Local energy infrastructure can be used to tap into the potential of LNG. Our operations via local LNG pipelines, in conjunction with power and gas companies, show that this model can work. At Koga Energy Co., Ltd. in Shiga prefecture, we manufacture city gas (natural gas) from LNG transported from the Sakai LNG Center operated by Kansai Electric Power Co., Inc. We have put in place a

framework to then supply that gas to industrial customers directly and to consumers via local company Koga Kyodo Gas Co. Ltd. As a trial aimed at substantially expanding the environment in which natural gas can be used more safely and with lower CO₂ emissions, from industry to everyday life, our operations are continuing to produce results and generate expertise at the local level.



DME (dimethyl ether)

Clean diesel vehicles are becoming more and more popular, particularly in Europe. In terms of next generation fuels, there are particularly high hopes for DME, refined from resources such as natural gas, coal and biogas. Here at Iwatani, we are working to establish the right environment to put DME into practice, through initiatives such as DME and LPG mixed combustion tests.



Cogeneration systems

Cogeneration systems combine gas engines and turbines to generate power, whilst at the same time using waste heat energy for purposes such as cooling and heating. Systems make efficient use of energy and can cater to a wide range of needs depending on the scale and purpose for which power and waste heat are used, from household systems to large-scale facilities.



Nationwide energy seminars

We organize seminars in an effort to provide our customers with solutions based on the comprehensive expertise that we have built up through our Gas & Energy business. We are constantly working to encourage customers to switch fuels from heavy oil to LPG, and to strike a balance between cutting costs for corporate clients through energy saving initiatives and reducing CO₂ emissions to protect the global environment.

Right by our customers' side, helping them to lead full and healthy lives



Cassette Gas series

Our Cassette Gas canister products continue to bring Iwatani closer into people's everyday lives, based on a steady stream of original ideas. In 1969 we launched a non-hose-fed stove called Cassette-Feu, which led to growing demand for a wide range of purposes, from household to leisure, and went on to become a best selling product in Europe, the US and other parts of Asia too. In an effort to open up even more possibili-

ties, we have launched products such as the Cassette Gas Barbecue Grill Station, to enable people to enjoy an authentic barbecue experience, and Cassette Gas portable stoves. Our Cassette Gas products make the most of expertise we have established whilst developing LPG handling technologies, as we continue to focus on new ways to bring gas into people's everyday lives.



Iwatani i-collect

Iwatani i-collect is a comprehensive shopping site that offers everything from household supplies, health food and outdoor products to fresh food from localities, along with tips and ideas for everyday life. With a framework in place to quickly provide people with essentials that may be in short supply in the event of an earthquake or other disaster, the site gives people peace of mind as they go about their lives.



Vanadium-rich Fuji-no-Yusui drinking water

Fuji no Yusui is natural mineral water rich in vanadium, taken from the nature-rich northern base of Mt. Fuji. It is kept under rigid quality control at a modern manufacturing plant and packaged under the D-pack system into single-use containers designed to prevent water from coming into contact with the air. We deliver this water safe from its collection point to the customer.

fujina - a moisturizing, mineral-based cosmetic

Our fujina cosmetics contain minerals from Mount Fuji and are blended with concentrated beauty-enhancing (moisturizing) additives designed to care for ageing skin. Products penetrate deep into the skin, helping to prevent dryness caused by mineral deficiencies and paving the way for glowing beautiful skin that is hydrated and firm.



Livingware

From our pioneering Milser range of food processors, designed to turn food into powders, juices or pastes in order to preserve all their nutrients when cooking, to outdoor products supplied via our joint venture with Swedish company Primus, we try to keep people healthy whether they're in the kitchen or outdoors.



Alala series

The key ingredient in our Alala detergents is natural palm oil, which is highly biodegradable and helps keep household wastewater clean. With a full range of products from clothing and kitchen detergents to body soaps, Alala is a natural brand that is kind to the skin as well as the environment.

Harnessing gas and technology to carve out a new future for industry

Here at Iwatani, we provide industry with a wide range of high-pressure gas support, from separating gases such as oxygen, nitrogen and argon from air to handling gases such as liquid hydrogen and helium at ultra-low temperatures.

We are constantly working to harness our gas technologies and come up with new solutions in different areas.



Helium container being shipped (Kobe, Hyogo prefecture)

Industrial Gases & Machinery



Strengthening gas supply infrastructure and catering to industrial needs



Separating gases from air

We contribute to a wide range of industries, from semiconductor manufacturing to the medical industry, by extracting oxygen, nitrogen and argon from liquefied air, using their different boiling points. We are constantly working to expand our production and supply network on a national scale, to establish a stable supply structure for separated gases.



A pioneer in hydrogen

As one of Japan's leading pioneers in the field, we have been working to develop and promote the use of hydrogen technology since 1958. We realized the potential of liquid hydrogen, which can be transported 12 times more efficiently than regular compressed hydrogen, at an early stage in that process and in 2006 established Hydroedge, a next-generation liquid hydrogen and separated

gas manufacturing plant in Sakai, Osaka prefecture. We went on to establish the first liquid hydrogen plant in East Japan in 2009, in Ichihara, Chiba prefecture. In 2013, our third domestic liquid hydrogen plant located in Shunan (Yamaguchi prefecture), Yamaguchi Liquid Hydrogen Corporation, went into operation.

Onsite supply

Onsite supply systems produce and supply gas via a plant installed directly on users' premises. As the most suitable equipment can be built into each user's plant, depending on their needs and conditions, it is possible to create more efficient production systems.



A leading supplier of helium

By utilizing helium's ultra-low boiling point of -269 Centigrade, we are deeply involved in fields applying state-of-the-art technologies. In 2013, Iwatani began direct import of eight million m³/year of helium produced in Qatar, which is equivalent to half of the domestic demand, in addition to continuing import from the United States. We also established

the Osaka Helium Center, one of the Japan's largest supply facilities, in the Suminoe-ku area of Osaka. In addition to our four domestic facilities in Tsukuba, Yokosuka, Osaka and Fukuoka, we are in the process of establishing facilities in China and Southeast Asia, so that we can reliably and efficiently cater to growing demand for helium.



Global business development

In the industrial gas sector, we have been operating the air separation business in the Chinese city of Dalian while running air separation operations and manufacturing carbon dioxide in East China (Shanghai). We are also expanding our sales network in China and Southeast Asia, and working to reinforce our sales structure for welding robots and other industrial machinery.

Harnessing creativity and the potential of gas to take on any challenge



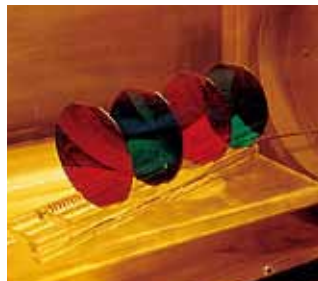
Hydrogen and liquid hydrogen

From environmental technologies to high-tech industries, hydrogen is used across a wide range of areas, for purposes such as fuel cells, semiconductor manufacturing, and rocket fuel. Liquid hydrogen meanwhile has the potential to transform our society, as a highly environmentally friendly energy source that offers a clean alternative to oil. We are constantly working to establish the infra-

structure we need for a hydrogen society, through a range of projects and pilot schemes such as Hydroedge, which made us the first company in Japan to supply liquid hydrogen for industrial purposes. Other examples include pipeline supplies of hydrogen produced as a byproduct at our plants, and our model hydrogen society project Kitakyushu Hydrogen Town.

Helium

Helium is a rare resource produced in just six countries and essential in the high-tech, medical and space industries to name just a few. As demand is expected to increase on a global scale in the future, securing stable supplies of helium is a top priority in terms of developing advanced industries. As Japan's leading helium supplier, we are endeavoring to ensure stable supplies.



Taking on the challenge of developing new gases

"If you need something, look for it. If you can't find it, make it." By transcending barriers between industries and sectors, and effectively sharing priorities with our customers, we can make the impossible possible. That is our view for new gas development activities here at Iwatani. In the highly concentrated ozone sector for instance, we have established technology capable of manufacturing and storing ozone with a concentration

of over 50%, which was previously thought to be impossible. That technology is now being used in areas such as semiconductor manufacturing. Non-plasma cleaning using CIF₃ (chlorine trifluoride), which has become the standard cleaning gas for purposes such as semiconductor manufacturing, is another technology developed exclusively by Iwatani. In other areas, we continue to develop new cutting and welding gases such as

Sharp Gas, a cutting gas that offers a safer alternative to acetylene. Other examples include welding shield gas and hydrogen-based cutting gas Hydro Cut. We are also opening up possibilities for gas in new areas, including MIX-GT and N₂-GT tire filling gases that are safer, more fuel efficient and better for the environment.



Harnessing cold heat

Technologies that are capable of controlling the transition of gas into liquid and solid form have a wide range of potential applications. Harnessing the specific properties of individual gases, we offer solutions that are tailor-made to suit a diverse range of needs, from frost shattering and flash freezing in the food industry to medical, environmental and high-tech applications.



Medical gases

Medical gases such as oxygen, nitrogen and carbon dioxide play a crucial role in supporting people's lives. Here at Iwatani, we provide total support for the medical industry, from creating the optimum gas environment based on the needs and scale of individual facilities to providing medical gas safety workshops for safe usage.



Supplying semiconductor gas

We promote development of original new gases through collaborations with semiconductor manufacturers and supply a full range of gases for use in semiconductor manufacturing processes, including material gas, atmospheric gas, and cleaning gas. We also provide integrated installation of gas supply and piping systems to safely control toxic gas and flammable gas.



Development and Proposal for Environmentally Friendly Products

We are always exploring the limitless possibilities of gas in order to help resolve issues in various different areas. Combining our technical capabilities as a manufacturer with our solution capabilities as a trading company, we continue to develop quality environmental products and offer improved solutions aimed at resolving, alleviating or reducing the impact of environmental issues. Examples include ECO FREEZE, a natural



coolant that offers an alternative to CFCs, and our Dry Ice Beads, which have a diameter of roughly 6mm and cool more efficiently than conventional dry ice, helping to save energy during refrigerated transportation. We continue to tap into the potential of gas across a wide range of areas such as these, and are determined to help resolve environmental issues on a cross-sector basis.



Carbon dioxide and dry ice

Our carbon dioxide and dry ice operations, which involve recovering, refining and reusing off-gas produced by the likes of chemical and steel manufacturers, are driven by creativity, constantly generating new value as well as reducing environmental impact. Our products are used for purposes such as welding, beer and other carbonated beverages, and the refrigeration and refrigerated

transport of food products. We continue to explore new possibilities in other areas too, such as neutralizing alkali drainage from dam construction, using the bacteriostatic action of carbon dioxide for use in post-harvest agrochemicals, and processing dry ice into pellets for blast washing. We are committed to developing new applications in our capacity as a gas solutions partner.



Manufacturing cryogenic equipment

Continual gas supply to customers is impossible without technologies for safe transport and storage of liquefied gas at a very low temperature. We manufacture and sell cryogenic equipment such as storage tanks and tanker trucks, drawing on our expertise in storing and transporting cryogenic liquid gases such as oxygen, nitrogen and hydrogen. We will vastly improve quality and cost competitiveness, take advantage of economies of scale and revise manufacturing methods in our efforts to dramatically reduce manufacturing costs.

We will continue to streamline operations and devise better means of transportation, storage and supply in the future, making the most of our experience and the low-temperature technologies we have developed as a manufacturer of liquid hydrogen and other ultra-low temperature gases.

Exploring on the diversity of gas, from environmental preservation to mechatronics



Semiconductor manufacturing equipment

We provide the semiconductor manufacturing sector with sophisticated one-stop solutions that encompass every process along the way. As well as facilities and systems however, we also provide a wide range of tailored support and consulting services, including package solutions using the very latest materials.



Highly concentrated ozone
(blue part in center of photo)

Automating cylinder management using RF tags

With the entire industry eager to streamline distribution and tighten security as part of the management of high-pressure cylinders, we are in the process of switching to RF (radio frequency) tags in accordance with standards set out by the Japan Industrial and Medical Gases Association. Having quickly recognized the potential of RF technology, which enables remote identification of individual

items, we have established an in-house management system that will increase cylinder turnover and improve our ability to identify abandoned or unmarked cylinders. We have also released a system called BINGO, which gives distributors online access to identification capabilities and databases via cloud computing.

WINSUT

Uniquely developed by Iwatani, WINSUT technology uses highly concentrated ozone with a concentration of over 50% to passivate metal surfaces on gas piping and semiconductor manufacturing facilities, in order to increase resistance to corrosive gases. It significantly reduces particle generation in manufacturing environments for delicate devices. Ozone turns into harmless oxygen after it is used.



Gas collectors

Although the manufacture of halon gas for use in fire extinguishers is prohibited due to its damaging effects on the ozone layer, it is still used by many facilities due to its excellent fire extinguishing capabilities and outstanding safety record. To cater to demand, we therefore operate two halon recovery and filling facilities, in Hyogo and Saitama prefectures.



Dyna Guard F, PFC waste gas burner

We developed the Dyna Guard F burner to remove PFCs (perfluoro compounds) from waste gas, in response to strong demand from the semiconductor industry. It is the first system in the world to use forced combustion to efficiently break down PFCs, which contribute to global warming and are subject to international reduction targets, and is a key element of our environmental technologies here at Iwatani.



LN2 concrete cleaning

At hot temperatures, there is an increased risk of concrete in structures such as dams and bridges deteriorating, especially due to cracking. Cooling fresh concrete with liquid nitrogen before it is cast however helps prevent cracks from forming once it hardens, resulting in better quality concrete.



Electronic component manufacturing equipment

We supply full processing lines for manufacturing facilities producing advanced electronic components, which act as key devices in products such as smart phones and tablets. We are constantly working to improve our solutions capabilities here at Iwatani, in line with growing demand for compact, sophisticated and high performance devices.



Welding, cutting, and industrial robots

We established the "Welding Gas Demonstration Room" in Iwatani R&D Center as a base for developing new technologies and providing customer support. Activities in this room include research and development in areas such as shield gas, assessment and testing of demonstration samples, and provision of welding testing and training services when users request us, in addition to supplying



welding gas. We have also reinforced our support and consulting abilities. For example, we provide integrated system solutions in partnership with wire, welding equipment, and robotics manufacturers. We are challenging a new stage as a system organizer that provides robotics applications for a whole series of processes including welding, cutting, coating, and grinding.



Integrated plant disaster prevention system

As an expert in gas security, we operate an integrated plant disaster prevention system that is designed to keep entire areas safe. The system utilizes all of the crisis management expertise we have built up to date and covers everything from monitoring safety using sensors to preventing and extinguishing chemical or flammable gas fires, and even counter-terrorism measures.



FA system

With our unique expertise, Iwatani supports streamlining and efficiency improvement of operations at diverse manufacturing facilities. We provide a wide range of solutions, including highly versatile machine and plating tools, exceedingly unique specialized plating and welding machinery, powder molding machinery, electronic component manufacturing equipment, and a variety of assembly devices, inspection devices, and logistics systems.



Waste gas treatment equipment

We strive to improve working conditions and protect the global environment by removing corrosive gases and odors from emissions produced by industrial manufacturing processes as efficiently and effectively as possible. In particular, we are building extensive expertise in odor control, to provide customers with tailored solutions to meet their specific needs.



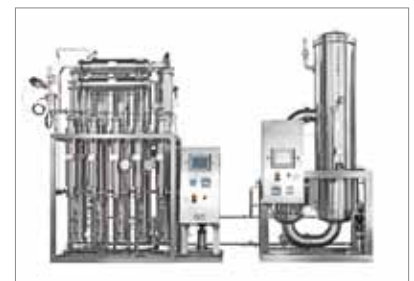
Biogas recycling systems

Biogas has drawn substantial attention as a renewable and clean source of energy since it is biologically derived and generates virtually no carbon dioxide emissions. Our biogas recycling systems turn biogas into energy for use in vehicles running on natural gas or fuel cells. They represent an effective form of action in terms of recycling resources.



VOC recovery equipment

Given the negative impact that they have on the environment and people's health, VOC (volatile organic compound) emissions are becoming a serious issue for a wide range of industries, including the semiconductor, liquid crystal and the auto industries. We offer a full range of solutions aimed at recovering, eliminating and treating VOC, in various different conditions and environments, covering markets in China and Southeast Asia as well as Japan.



Medical systems

We provide pharmaceutical manufacturers with state-of-the-art medical systems to keep pace with continuing advances in medical services. We supply a wide range of products, from water purification and filling systems (distilled water, sterile pure water, etc.) to various testing systems, along with expert technical support.

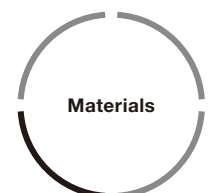


Not all niche markets are small Creating substantial businesses from materials

Here at Iwatani, we cater to a wide range of needs from industries through our material operations, from mineral sands to investment in overseas resource development and core initiatives in areas such as the environment, medicine and precision components.

Unloading mineral sand (Nagoya, Aichi prefecture)

Materials



Developing resources and applications to carve out new markets



Mineral sands and mineral products and materials

We supply a range of mineral sands and have long since boasted a leading share of the domestic markets for zircon, which is used as a raw material in plasma display panels (PDP), semiconductor abrasives, ceramics and refractories and titanium, which is used as a raw material in pigments and welding materials. We import mineral products and raw materials from countries such as China

and Australia, and then sell them in Japan for use in a whole host of different areas, from the refractory and pigment industries to electronic materials industry. We have also expanded our scope of operations to include the advanced ceramics sector, as we continue to cater precisely to modern-day needs.



Stainless steel, aluminum and high alloys

In Japan, we have established a nationwide processing, inventory and logistics network, revolving around the Iwatani Stainless-Kai, and are working to put in place a more mobile framework to cater to users' specific needs. Overseas, we are focusing on sales of high alloys to power, gas and chemical plants.



Metal product

We continue to establish manufacturing plants in China and Southeast Asia in particular, as we shift to a more manufacturing-oriented position. We are determined to keep on developing, offering and supplying processed metal products to a wide range of sectors in the future, including growth sectors such as the automotive industry, home appliances and electronic components.



Synthetic resin materials and functional resin products

We supply raw materials for synthetic resins and finished resin products both inside and outside Japan via our network across China and Southeast Asia. We continue to develop products aimed at protecting the global environment and catering precisely to changing market needs, including plant-based biomass PET plastic and functional films for use in solar cells.



Ceramic materials and ceramic products

We supply ceramic raw materials, such as rare earth and zirconia compounds, for use in catalysts, electronics and various other sectors. We also sell casts and products using those ceramic materials. On other fronts, we continue to develop innovative nano-materials, an area that is expected to grow considerably in the future.



Electronic and display materials

We have our own processing facilities for metals, functional films and electronic ceramics, both inside and outside Japan, and can cater to a wide range of needs in electronic and related sectors. We continue to develop new products and materials under our own unique brands, focusing particularly on raw materials and components in growth areas such as smart phones, tablet computers and lithium ion batteries.



Harnessing nature's bounty to improve the quality of everyday life

We try to make a difference for food producers and consumers alike. From supporting the farming and livestock industries and importing fruit, vegetables and other frozen foods to developing health and dietary supplements, we only supply products that are guaranteed to be safe and secure.

Inspecting frozen food at one of our warehouses (Kawasaki, Kanagawa prefecture)

Agri-Bio & Foods



New ideas for everyday life, approached from an agricultural perspective



Food products

Our philosophy when it comes to food is to provide people with plenty of quality products they want, whenever they want them. We provide quality seasonal produce from Japan and all over the world, with the aim of enriching people's everyday lives with delicious food products via our brand "Foods Land." Having started out supplying frozen vegetables, we now provide a complete

range of frozen foods, including processed vegetable, meats and seafood, breads and desserts. From commercial to household products, we bring great tasting food to people's tables safely and securely.



Livestock products

In an effort to develop to Japanese tastes in meat, and to maintain a high rate of reproduction ability, we breed Camborough hybrid gilts and boars at Iwatani Camborough Co. Ltd. and at contracted stud pig farms in three other locations around Japan. As well as selling Camborough gilts and boars, we also supply feeding management technologies and offer the very latest pig farming systems.



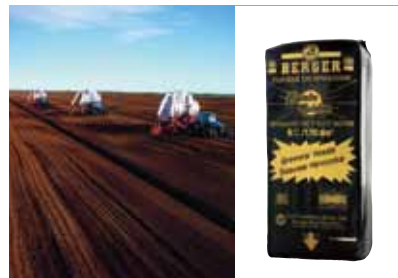
Health food

Making the most of our expertise as a gas company, we use liquid hydrogen-based ultra deep freezing and grinding technologies to create products that capture quality ingredients at their best, including Katsuryoku Aojiru (vegetable juice), Sesame Tofu powder, Sporiki E (supplement tablets) and Azabu Kozeniya Suppon turtle soup (soft-shelled turtle soup). We have also scored a hit with our "Seiichi Shigehisa range of black vinegar

drinks" made from brown rice, which we uncovered thanks to our regional network here at Iwatani. We offer a wide range of products to suit health and beauty needs too, including F-Colla Plus, which combines collagen with natural Agave inulin fiber extracted from the Agave plant. As well as being great tasting, safe and secure, our food products also help people lead more healthy lives.

Integrated pest Management

We provide pest control services (smoke fumigants, etc.), develop and manufacture insecticides and provide consulting services in accordance with food safety standards, including FSSC and AIB, via Kokusai Eisei Co. Ltd. We also offer a more advanced approach to environmental design, through services such as analyzing contaminants, controlling harmful organisms and improving manufacturing conditions through HACCP procedures.



Vegetable factories

We provide the ideal cultivation environment for growing vegetables, by creating clean, productive conditions via "soilless used culture-solution," regulating concentrations of carbon dioxide for photosynthesis, and controlling temperature levels using equipment such as heat pumps. We offer a new business model, designed to produce vegetables safely and securely for the future of Japan.

Agri-bio business

The aim of our agri-bio business is to improve productivity through the development of new agricultural systems, which aim at developing and promoting "science-based agriculture" independent of experience and intuition, including importing peat moss to improve substrate quality, the Iwatani Plug System, the Iwatani propagation medium system and the Iwatani NeoCape System, which encourages fruit to ripen, to remove the astringency of astringent persimmon.

Alfloc

Alfloc trolleys are specifically designed to eliminate the process of repeatedly transferring plants and flowers during distribution, enabling a new approach to through-transit so that producers can get their flowers to market quickly without damaging them. We are working to develop a new standard in flower distribution, revolving around the roughly 40,000 Alfloc trolleys currently in use around the country.



**A world where all enjoy true comfort
- this is Iwatani's desire.**



Naoji Iwatani, the founder of Iwatani Corporation, viewed companies as part of the natural order of things, much like people, based on Darwin's theory of evolution.

That led to the notion of "circulation," based on respecting and benefiting from nature. We have remained true to that philosophy right through to the present day, and continue to provide support for education, culture and sports, as ties that bind us to the global environment and the local community.

We want to bring people and nature closer together.

That is an important step if we want to make the earth a better place.

We benefit from nature, so we should give back to nature too.

If we keep on doing that, it will pave the way for the next generation and beyond.

Giving something back to society as well as creating new things



Iwatani Naoji Foundation

The Iwatani Naoji Foundation was established, and initially funded, by Naoji Iwatani, the founder of Iwatani Corporation in 1973, with the aim of making people happy and contributing to social development. The foundation's social activities revolve mainly around providing research grants in the Gas & Energy sector, assistance for overseas students from Asian countries and support for international exchange programs for young people. It also contributes to society and individuals through schemes such as the Iwatani Naoji Memorial Award, science and technology grants and research support for overseas students.

The Iwatani Group. Environmental Charter

We set out the Iwatani Group Environmental Charter in 1998, based on our slogan "Our aim is to make the Earth a better place to live." That philosophy remains at the heart of all of our business activities, as we keep on striving to create a recycling oriented society. As a group, we contribute to worldwide development by reducing environmental impact and implement practical initiatives across various different sectors.

Creating energy through interaction



Working in partnership with the NHK Symphony Orchestra

Iwatani supports the NHK Symphony Orchestra in its determination "to aim to enhance and develop the musical art of our country through symphonies, and accomplish the orchestra's mission in society," and have been co-sponsoring local performances and meet-and-greet concerts where the orchestra's members meet young musicians ever since 1987. In particular, we sponsor "NHK Symphony Orchestra 'Summer'" in our role as a special partner company. We are contributing to promote cultural interaction with the local community through music.

Japan International Birdman Rally

As part of a project to mark our 80th anniversary in 2010, we began co-sponsoring and helping to organize a birdman contest. The concept of seeing who can fly the furthest in a man-powered aircraft ties in perfectly with our commitment to creating a clean energy society. We are always keen to support environmental events, so that we can help make the earth a better place to live.

Looking to the future of mankind and nature in our role as a corporate citizen



Marui Gas Emergency Taskforce

Our Marui Gas Emergency Taskforce is a national organization that quickly heads out to the scene of any disaster to provide services such as restoring LPG supplies and carrying out safety inspections on gas equipment. Following the Great East Japan Earthquake in 2011, taskforce members immediately went out to the affected area, taking with them 320 LPG bottles and emergency relief supplies, in order to provide immediate assistance on behalf of the Iwatani Group.

Marui Gas Emergency Taskforce Nationwide Drill

Nobody can predict when disaster might strike. That's why we launched the Marui Gas Emergency Taskforce in 1996, after the Great Hanshin-Awaji Earthquake. We also set aside one day in October each year as Marui Gas Disaster Drill Day and conduct a nationwide drill. The aim is to incorporate practical training activities in the event of a disaster, such as checking that everyone is safe and being prepared to mobilize at short notice.



Creating a hydrogen energy society

We are working to establish a production and supply framework aimed promoting hydrogen as a form of energy, not least through Hydro Edge Co.,Ltd. At the same time, we are also conducting pilot schemes in order to improve infrastructure facilities, including road testing hydrogen stations and fuel cell vehicles, and organizing events in order to raise awareness. We will continue to implement initiatives from various different angles, as we pave the way for a hydrogen energy society in the future.



Supporting educational and cultural programs

As a forward-thinking company, we believe that one of our key responsibilities is to pass the baton on to the next generation in terms of technology for the future. We try to give children an all-round experience of hydrogen energy, through experiments involving the electrolysis of water for instance or toy hydrogen-powered vehicles. As part of our activities, we also co-sponsor the youth science event Science Festa.



Iwatani R&D Center inaugurated as a new technology center

Iwatani pursues new possibilities for gas and energy by harmony between the information power we possess as a trading company and our technological abilities as a manufacturer. Construction of the Iwatani R&D Center was completed and the facility entered into operation in April 2013. The center strives to create new value by engaging in basic research, technological development, application development and product development in the fields of gas, energy and materials.



Helping to improve welding technologies in countries throughout Asia

We ran welding technology seminars and welding competitions in the Chinese city of Dalian for ten years from 1997 onwards, with the aim of improving welding technologies in rapidly growing Asian countries. We have continued to actively engage in initiatives since then too, including welding seminars in Hanoi (Vietnam) in 2007 and in Jakarta (Indonesia) in 2013.



Education system Biwako Conference Center

We use the Biwako Conference Center, the first facility in Japan to be approved by the American Conference Institute, for employee training and various other practical training sessions, seminars and qualification schemes. The center's facilities combine Iwatani's expertise in human resource development with a beautiful natural environment and are also open to other companies and organizations outside the Iwatani Group.



All Japan Elementary School Essay Contest

We launched the All Japan Elementary School Essay Contest in 2010 as part of a project to mark our 80th anniversary. Based on the theme "A world where all enjoy true comfort -this is Iwatani's desire," the event echoes our slogan "Iwatani, making the earth a better place to live" and is aimed at encouraging children to join us in thinking about the future. Full of realization and new discoveries, the children's words show the way forward for the future.



Saudi Aramco - Iwatani Corporation Emergency LPG Relief Program

We established the Emergency LPG Relief Program as a joint fund with Saudi Aramco, Saudi Arabia's state-owned national oil company, in order to provide portable gas stoves and canisters free of charge in the event of a large-scale disaster in Japan. We doubled the fund to two million dollars following the Great East Japan Earthquake and provided a total of 21,680 portable stoves and 120,000 gas canisters.



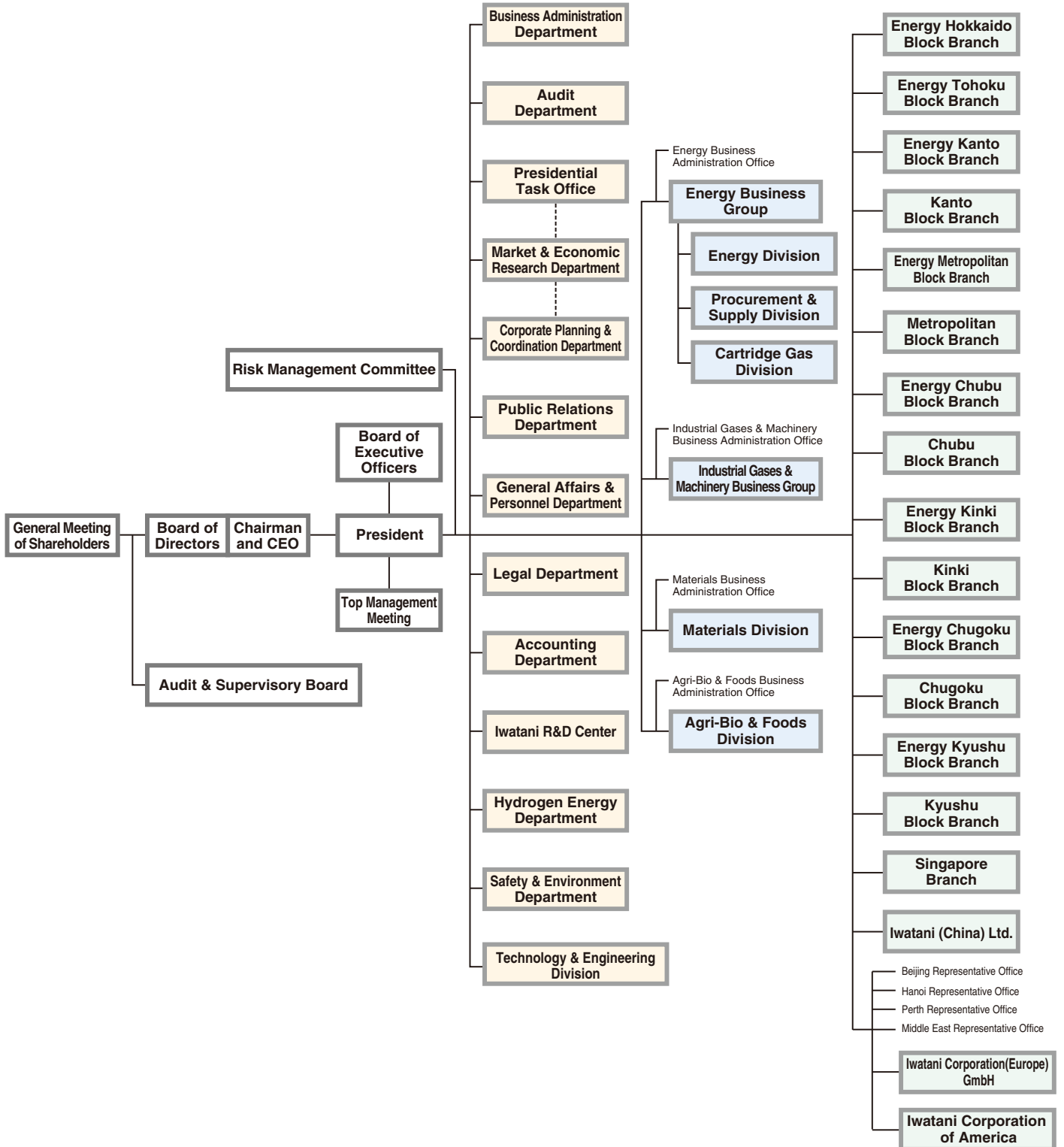
Energy seminars for the manufacturing industry

We have been organizing nationwide energy seminars for the manufacturing industry since 2009, to encourage plants to switch from fuels such as heavy oil to low environmental impact alternatives such as LPG and natural gas, and to promote energy saving measures such as installing solar power systems. We will continue to offer a wide range of solutions designed to make the earth a better place to live in the future.



Green exterior walls at the Tokyo Head Office and at the Iwatani R&D Center

As part of our efforts to promote urban greening systems, which help plants to grow and are easy to install and maintain, we have added greenery to the walls at our Tokyo Head Office and at the Iwatani R&D Center. The greening system that we have installed combines several types of plant and is expected to help purify the air, as well as giving a richer, more luxurious feel to the urban landscape and providing a pleasant outlook for people as they walk by.



Corporate Profile

Name: **Iwatani Corporation**
Founded: **May 5, 1930**
Incorporated: **February 2, 1945**
Chairman & CEO: **Akiji Makino**
Vice Chairman: **Toshio Watanabe**
President: **Masao Nomura**

History


- 1930 Founded Naoji Iwatani Shoten in Minato-ku, Osaka, and began selling oxygen, welding rods and carbide.
- 1945 Founded Iwatani Sangyo Co.,Ltd. with capital of ¥198,000, with founder Naoji Iwatani as President.
- 1947 Completed Head Office at Honmachi 3-chome, Higashi-ku, Osaka.
- 1953 Began selling Marui Propane household products.
- 1962 Listed shares on the Second Section of the Osaka Securities Exchange and Tokyo Stock Exchange (upgraded to First Section in 1965).
- 1964 Became the sole distributor in Japan for Australian company AMA and further increased volume of trade in mineral sand. Marui Propane chosen to power the Olympic flame at the 1964 Tokyo Olympics.
- 1966 Began importing LPG from Canada.
- 1969 Developed and began selling two major brands, the Mihari gas leak detector and the Cassette-Feu hose-free portable stove. Established dual head office system based in Tokyo and Osaka.
- 1970 Relocated Osaka Head Office to 4-8, Honmachi 3-chome, Chuo-ku, Osaka. Adopted new corporate slogan "Iwatani, making the earth a better place to live."
- 1972 Designated a friendly trading company in China, paving the way for fully-fledged trade with China.
- 1973 Founded Iwatani Naoji Foundation.
- 1975 Founded Cold Air Products Co., Ltd., a joint venture with Osaka Gas Co.,Ltd. and began to produce gas via air separation on a commercial scale.
- 1977 Became a primary trading partner with Kawasaki Steel Corporation and expanded metal operations.
- 1978 Completed Japan's first fully-fledged liquid hydrogen plant. Began supplying liquid hydrogen for all H-model space exploration rockets from 1986 onwards.
- 1980 Celebrated 50th anniversary. Completed Sakai LPG terminal (with a capacity of just over 80,000 tons) and began directly importing LPG from Petromin the following year.
- 1983 Completed Iwatani Industrial Gases Corporation's Kofu Plant, the first separated gas plant in eastern Japan.
- 1985 Formed business partnership in the industrial gas sector with Union Carbide Corporation (USA). Appointed Koji Saito as President, with Naoji Iwatani as Chairman.
- 1986 Set out plans for a secondary lifestyle business and began "lifestyle upgrade" operations.
- 1987 Adopted **Iwatani** logo. Founded Shiga Technology Center (Moriyama). Began working in partnership with the NHK Symphony Orchestra, going on to receive the orchestra's Arima Award in 1993.
- 1989 Launched a number of joint ventures in China, starting with Dalian Iwatani Gas Machinery Co., Ltd.
- 1990 Celebrated 60th anniversary.
- 1991 Received the Mecenat Award for corporate support of the arts at the 1st Mecenat Awards.
- 1993 Changed brand name to **Marui** gas to mark the 40th anniversary of Marui Propane.
- 1994 Completed and began operations at Kashima LPG Joint Stockpiling Base (225,000 tons) and Kizuregawa Separated Gas Plant.
- 1995 Sent out emergency supplies of Cassette-Feu portable stoves to the area affected by the Great Hanshin-Awaji Earthquake. Received Excellence Award at the Keidanren (Japan Business Federation) 11th Corporate Communication Awards.
- 1997 Founded the Iwatani Group Environmental Charter. Relocated Tokyo Head Office to current address.
- 1998 Appointed Tatsuo Yagii as President, with Naoji Iwatani as Honorary Chairman.
- 2000 Celebrated 70th anniversary. Appointed Akiji Makino as President. Founded joint LNG sales companies with three regional power companies in Kansai, Chubu and Hokuriku (2000-2001). Completed three-year process of obtaining ISO 14001 certification for all premises at branch level or higher (started in 1998). Developed the self-station a simple LPG filling station.
- 2002 Continued to improve hydrogen infrastructure by completing Osaka Torishima Hydrogen Station, the first of its kind in Japan, and developing country's first mobile hydrogen station.
- 2003 Became the first private company in Japan to buy two fuel cell vehicles (Honda FCX and Toyota FCHV) and organized promotional events nationwide. Completed Ariake Hydrogen Station in Tokyo. Jointly developed pickup truck and welfare minibus powered by next generation fuel DME.
- 2004 Introduced executive officer system. Sent out emergency supplies of portable gas stoves and canisters to the area affected by the Niigata Chuetsu Earthquake, and dispatched the Marui Gas Emergency Taskforce.
- 2005 Founded Shikoku Iwatani Sangyo Co.,Ltd. as a separate regional entity. Jointly developed a liquid hydrogen-based mobile power station in partnership with Kansai Electric Power Co.,Ltd. Began trialing an LPG reformed fuel cell cogeneration system for household use in partnership with Toshiba Fuel Cell Power Systems Corporation.
- 2006 Completed construction of Kamisu National LPG Stockpiling Base (200,000 tons), Japan's third national LPG stockpiling base. Purchased RX-8 Hydrogen RE, a hydrogen rotary engine vehicle developed by Mazda Motor Corporation. Began liquid hydrogen and air separation gas operations at Hydro Edge Co.,Ltd. (founded jointly with Sakai LNG Co.,Ltd. in 2004). Received the Konstantin Tsiolkovsky Award from the International Association for Hydrogen Energy.
- 2007 Dispatched the Marui Gas Emergency Taskforce to the area affected by the Noto. Peninsula Earthquake and sent out emergency supplies including Cassette-Feu portable stoves. Founded IN Stainless Steel Process Center in eastern Japan. Completed and began operations at HJFC Kansai Airport Hydrogen Station. Began supplying natural gas through group company Koga Energy Co.,Ltd. Organized fuel cell and hydrogen vehicle touring event across Japan, from Tanegashima in the south to Wakkanai in the north, and held hydrogen-themed science classes at various local events.
- 2008 Founded Delhi Liaison Office. Began supplying LNG to industries in the Kanto region. Changed name to **Iwatani Corporation** in English. Developed new technology to condense ozone gas at room temperature. Teamed up with Kyoto University to develop ClF₃ (chlorine trifluoride) gas cluster etching technology for use in semiconductor manufacturing.
- 2009 Jointly Founded the Saudi Aramco-Iwatani Emergency LPG Relief Program. Completed Iwatani Industrial Gases Corporation's Chiba Plant, the first liquid hydrogen plant in eastern Japan. Began full-fledged sale of ENE-FARM household fuel cell systems throughout Japan. Drove four hydrogen vehicles a distance of 626km from Sakai to Kitakyushu as part of the West Japan Hydrogen Highway Demonstration Project. Completed and began operations at Kitakyushu Hydrogen Station. Developed a hydrogen bicycle with a compact pure-hydrogen fuel cell.
- 2010 Celebrated 80th anniversary. Completed and began operations at the Osaka Helium Center, integrating capabilities from Sakai and Okazaki. Relocated Osaka Head Office.
- 2011 Sent out emergency supplies following the Great East Japan Earthquake, including 350,000 portable stoves and 9.05 million gas canisters.
- 2012 Appointed Akiji Makino as Chairman and CEO, with Toshio Watanabe as Vice Chairman and Masao Nomura as President.
- 2013 Iwatani R&D Center was completed in Amagasaki (Hyogo prefecture). Launched fujina, a cosmetics product made using Fuji-no-Yusui. A third domestic liquid hydrogen plant located in Shunan (Yamaguchi prefecture), Yamaguchi Liquid Hydrogen Corporation, went into operation.
- 2014 Opened Iwatani Hydrogen Refueling Station in Amagasaki, Japan's first commercial hydrogen station. Applying the exhaust gas processing technology we have developed over the years, we established the world's first fluorite synthesis technology in collaboration with the Nagoya Institute of Technology and Uedalime Manufacturing Co., Ltd. We also began operation of Iwatani Hydrogen Station Kokura, Kyushu's first commercial hydrogen station. In addition, we founded Sakai Carbonics, our fourth liquefied carbonic acid manufacturing plant in Japan.
- 2015 We established a new hydrogen-supply company in collaboration with Toyota Tsusho Corporation and Taiyo Nippon Sanso Corporation, and launched Japan's first commercial mobile hydrogen station through this company. We also opened Iwatani Hydrogen Station Shiba Park as a commercial hydrogen station near Tokyo Tower.

Divisional History

Industrial Gases & Machinery

- 1930 Established Naoji Iwatani Shoten in Minato-ku, Osaka, and began selling oxygen, welding rods and carbide.
- 1939 Established Kinsei Kaiun Shokai.
- 1945 Established Iwatani Sangyo co.,Ltd. with capital of ¥198,000, with founder Naoji Iwatani as President.
- 1947 Completed Head Office at Honmachi 3-chome, Higashi-ku, Osaka.
- 1949 Established Kokura Sales Office.
- 1952 The company began dealing in Kohtaki Precision Machine's pumps for the information and electronics sectors.
- 1956 Joined forces with other companies with specialist technologies to develop a coal-based automatic arc welding system.
- 1958 Established Osaka Hydrogen Industries co.,Ltd. (now Iwatani Industrial Gases Corporation).
- 1960 Developed original hydrogen trailer, the first commercially available product of its kind in Japan.
- 1962 Began selling Sharp Gas cutting gas.
- 1964 Sharp Gas officially adopted by Yawata Works.
- 1968 Handled sales of PC automatic cutting machinery manufactured by Precision Welding and Cutting Machinery Co.,Ltd. (now Kohtaki Precision Machine Co.,Ltd.).
- 1969 The company began dealing in STILMAS distilled water manufacturing equipment to sell medical equipment for the first time.
- 1970 Began selling Wel-Cut mixed gas throughout Japan.
- 1975 Restructured Iwatani-kai according to individual product categories. Established Cold Air Products co.,Ltd. (CAP).
- 1976 Conducted discharge, diffusion and combustion experiments on liquid hydrogen.
Began selling Hi-Ray LN continuous rapid freezing systems.
- 1977 Began selling Motoman vertical articulated welding robots.
Began selling Acom Gas shield gas.
NASSET formed.
- 1979 Began operations of Tokyo Gas Center and established gas centers throughout Japan.
- 1982 Began supplying nitrogen PSA.
Established Fine Gas Co.,Ltd., a joint venture with Seitetsu Chemical Industry Co.,Ltd. (now Sumitomo Seika Chemicals Co.,Ltd.).
- 1983 Completed Iwatani Gas Industries Corporation's Kofu Plant (now Iwatani Industrial Gases Corporation), the first separated gas plant in eastern Japan.
- 1984 Established Japan Liquid Hydrogen Co.,Ltd. as a specialist liquid hydrogen manufacturer (dissolved in July 1995)
- 1985 Formed business partnership with Union Carbide Corporation (UCC).
Launched technical transfer project.
Completed Sakai Helium Center and began rolling out centers nationwide.
Developed ClF₃ (chlorine trifluoride) cleaning gas in partnership with Central Glass Co.,Ltd.
The company entered the semiconductor area at full scale.
- 1986 Completed Sakai Helium Center and began rolling out centers nationwide.
- 1987 Established Shiga Technology Center (Moriyama).
- 1989 Began upgrading and constructing new industrial gas supply facilities.
Launched a number of joint ventures in China, starting with Dalian Iwatani Gas Machinery Co.,Ltd.
- 1994 Completed and began operations at Kashima LPG Joint Stockpiling Co.,Ltd. and Kizuregawa Separated Gas Plant.
- 1995 Established Iwatani Hokuriku Gas Center as a joint venture with Sakaisangyo Co. Ltd.
Completed air gas plant on the site of the Iwakuni-Ohtake Works at Mitsui Petrochemical Industries Ltd. (now Mitsui Chemicals).
Established Aneka Iwatani Industrial Gases PT. in Indonesia.
- 1997 Stepped up technical and human exchange with the city of Dalian.
- 1998 Began commissioned processing operations using WINSUT.
- 2000 Developed and began selling Dyna Guard F products.
Full-scale entry into the optoelectronics market.
- 2003 Launched the Industrial Gas Structural Reform Project.
Developed WINZONE, the world's first ozone gas containing cylinders.
Developed the WINLOOP dry fluorine recycling system.
- 2006 Began air separation gas operations in the Chinese city of Jiaxing, Zhejiang province.
- 2008 Developed ClF₃ gas cluster etching technology in partnership with Kyoto University.
- 2010 Began six-month fuel cell vehicle trial in Yamanashi prefecture (Toyota FCHV-adv). Installed mobile power station.
Secured right to import helium from Qatar.
- 2011 Upgraded air separation plant at Iwatani Industrial Gases Corporation's Kofu Plant.
Acquired cryo business (A-TEC Co.,Ltd.).
The company set up a halon recovery and filling system at the Himeji Plant of Iwatani Industrial Gas Corporation.
- 2012 Developed Hydro Cut, a new hydrogen-based mixed gas for welding and cutting.
- 2013 Commenced shipment of helium from Qatar.

Energy

- 1953 Established Propane Section in order to get LPG business up and running. Signed exclusive distribution agreement for propane gas in western Japan.
- 1954 Upgraded Propane Section to Propane Department and began the full-fledged sale of propane gas.
- 1957 Formed Marui Propane-Kai (now Marui-Kai). Began to import and sell Primus products.
- 1958 Established large-scale supply facilities throughout Japan, starting with Kokura.
- 1962 Began shipping large volumes of products overseas. Launched the Alala series.
Developed commercially viable LPG taxis in Osaka.
- 1963 Began selling Sky Rocket 3.5 autogas stands.
- 1964 Marui Propane chosen to power the Olympic flame at the Tokyo Olympics.
- 1965 Established Safety Department (Propane Division).
Established LPG Technology Section.
Completed the Yamahide Maru LPG import tanker.
- 1967 Ran P-100 pure propane campaign.
- 1969 Developed and began selling two major brands, the Mihari gas leak detector and the Cassette-Feu hose-free portable stove.
- 1970 Began importing and selling Vulcan Superheat high-end heaters.
Developed INTAC cockroach trap.
Formed Mihari project team.
- 1971 Ran "No More Gas Accidents" campaign.
- 1974 Established Marui Supply Center to handle specific MPS measures.
- 1976 Abolished standard pricing structure.
- 1977 Began selling Alala Clean products.
- 1980 Signed agreement with Petromin.
Completed Sakai LPG Terminal.
Developed health food products made from ground snapping turtle(suppon).
- 1981 First tanker importing LPG from Saudi Arabia arrived at Sakai LPG Terminal.
- 1985 Began installing cogeneration systems in factories, hotels and other establishments.
- 1987 Set up "Lifestyle Upgrade Shops" nationwide, providing a wide range of products and services.
Developed Tele-Safe 24-hour monitoring system.
- 1988 Developed Milser food processors.
- 1991 Began trial redevelopment of LPG supply network.
- 1992 Signed long-term LPG import agreement with Samarec (now Saudi Aramco).
Established Maruigas Corporation.
- 1993 Changed brand name to  Maruigas to mark the 40th anniversary of Marui Propane.
- 1994 Completed and began operations at Kashima LPG Joint Stockpiling Base (225,000 tons) and Kitasuregawa Separated Gas Plant.
- 1995 Established Marui Gas Emergency Taskforce.
- 1998 Established Iwatani Maruigas Corporation.
- 1999 Began supplying high purity LPG coolant ECO FREEZE.
- 2000 Formed business partnerships with power companies in an effort to establish LNG supply operations.
- 2001 Developed the self-station a simple LPG filling station.
Began working on ESCO operations.
- 2002 Launched the Marui Gas Business Restructuring Project.
Began selling Triple Keibu multipurpose detectors.
- 2003 Began going out to consumer's homes nationwide to provide Kitchen Safety Inspection services.
- 2004 Entered home delivery market, supplying vanadium-rich Fuji-no-Yusui mineral water.
- 2008 Established Marui Gas Supply Chain Association.
Began testing cogeneration systems equipped with pure hydrogen fuel cells.
- 2009 Began selling ENE-FARM household fuel cell cogeneration systems.
- 2010 Began selling disposable packs from third Fuji-no-Yusui plant.
Held launch ceremony for mobile children's emergency services.
- 2011 Sent out emergency supplies of Cassette-Feu portable stoves to the area affected by the Great East Japan Earthquake.
Donated gas heat pumps (GHP) to the area affected by the Great East Japan Earthquake. Began selling portable gas stoves for indoor use.
Began selling disaster-resistant LPG gas generators.
Formed business partnership with Starts Corporation in an effort to promote LPG-fueled disaster-resistant apartments.
Began selling computerized gas meters with added safety features, the first product of its kind in China.
- 2012 Began selling KazeMaru wind-resistant portable stoves.
Completed work on core LPG centers in 11 locations and continued to expand steadily.
- 2014 Released the Grill Station barbecue grill powered by gas cassette cartridges.

Materials, Agri-Bio & Foods

- 1946 Selected as designated container wholesaler (iron, steel and other metals) for Fuso Metal Industries Co.,Ltd. (later Sumitomo Metal Industries Ltd.).
- 1952 Began supplying vinyl chloride pipes manufactured by Sekisui Chemical Co.,Ltd. (synthetic resin).
- 1953 Began supplying rutile sand (mineral products).
Used vinyl chloride pipes as a springboard to enter construction machinery sector.
- 1960 Began importing and selling Bruder products (livestock).
- 1964 Signed exclusive distribution agreement with Australian Minerals Association.
- 1966 Designated as primary distributor for new low-density polyethylene products manufactured by Ube Industries Co.,Ltd.
- 1967 Began importing food products (food and health food).
Began manufacturing and selling Skytanks.
- 1968 Began importing and selling peat moss (agriculture).
- 1970 Began importing automatic poultry farming systems manufactured by AR Wood Mfg Company.
Developed NeoCape fruit tree ripening system.
- 1972 Developed Bander plowing machinery.
- 1974 Began selling frozen vegetables.
- 1975 Began selling Iwatani AgriHouse agricultural greenhouses.
- 1976 Developed iWrap plastic bags (patented) in partnership with Idemitsu Kosan Co.,Ltd.
Developed Sesame Tofu powder.
- 1977 Designated as primary distributor for Kawasaki Steel Corporation.
- 1979 Entered pig breeding business (livestock).
- 1980 Launched health food business.
- 1986 Developed Naistud construction technique.
- 1988 Established Iwatani Agrigreen Co.,Ltd.
- 1989 Established Iwatani Stainless-Kai.
- 1990 Established Bangkok AI-TOA Co.,Ltd.
- 1992 Established Iwatani Techno Construction Co.,Ltd. (now Iwatani Techno Co.,Ltd.)
- 1993 Began trading with Chinese food manufacturer Longda Foodstuffs Co.,Ltd.
- 1995 Launched Alfloc rental business.
- 1997 Obtained exclusive distribution rights in Japan for Australian Fused Materials Pty. Ltd.
- 1998 Developed new commercial breeding boar PIC265.
Launched metal slit business via Zhongshan Iwatani Co.,Ltd.
- 1999 Established Iwatani Materials Corporation.
- 2005 Designated as primary distributor for Prime Polymer Co.,Ltd.
- 2010 Signed exclusive distribution agreement with Chinese manufacturers.
The company signed an exclusive distribution agreement with Chinese manufacturers of cobalt oxide as a material for positive electrodes of lithium ion batteries.
- 2012 Developed environmentally friendly resin made from 30% plant-based materials.

Safety and Security

- 1955 National Propane Association (now the Japan L.P. Gas Sales Association) established.
- 1958 Began using "LPG Fire Prevention" promotional film produced by the US National Fire Protection Association (NFPA).
- 1965 Established Safety Department (Propane Division).
- 1969 Developed and began selling Mihari gas leak detectors.
- 1974 Signed up to the Sunshine Program.
- 1977 Established Marui Improvement Associations (safety promotion committees) at branch companies.
- 1978 Sent out emergency supplies of Cassette-Feu portable stoves following the 1978 Miyagi Earthquake.
- 1995 Sent out emergency supplies of Cassette-Feu portable stoves following the Great Hanshin-Awaji Earthquake.
- 1996 Formulated the Iwatani Group Safety Principles, Iwatani Group Safety Guidelines and ISS.
Renamed the Safety Department the Safety & Environment Department.
- 1997 Established the Iwatani Group Environmental Charter.
- 1998 Established Iwatani Gas Standard Co.,Ltd.
- 2000 Issued Environmental Notebook.
Published High-Pressure Gas Handbook.
- 2005 Began promoting "total safety."

Overseas

- 1939 Established Kinsei Kaiun Shokai in Shanghai, China.
- 1949 Began exporting welding and cutting tools to Taiwan, the start of a network of bases across Asia, Oceania, Europe and the US.
- 1972 Designated a friendly trading company in China and began to expand business on a locally-oriented basis.
- 1979 Implemented organizational reforms to establish companywide trade framework.
- 1989 Established Dalian Iwatani Gas Machinery Co.,Ltd. as a joint venture with the city of Dalian.
- 1994 Established Shanghai Petrochem-Iwatani Gases Development Co.,Ltd. as a joint venture with a SINOPEC (China Petrochemical Corporation) Group company.
Invested in Shanghai Rishen Food Products Co.,Ltd. and began to manufacture rice flour (food sector).
- 1995 Established wire rod processing company Zhongshan Iwatani Co.,Ltd. in southern China (metal and machinery sector).
Established local trading company Shanghai Iwatani Co.,Ltd.
- 2000 Conducted a comprehensive review of overseas operations in all areas.
- 2010 Established Wuhan Iwatani Commercial Trade Co.,Ltd.
- 2011 Established Iwatani India Pvt. Ltd.

Hydrogen

- 1958 Established Osaka Hydrogen Industries Ltd. (now Iwatani Industrial Gases Corporation).
- 1965 Established method of manufacturing liquid hydrogen and started research and development of storage and transportation methods.
- 1978 Completed Japan's first fully-fledged liquid hydrogen plant.
Began supplying liquid hydrogen for all H-model space exploration rockets from 1986 onwards.
- 1986 Signed up to the International Clean Energy System Using Hydrogen Conversion (WE-NET) project.
- 1993 First H-I rocket test launch.
- 2000 Completed hydrogen supply station.
Purchased lease on fuel cell vehicles.
- 2004 Fukuoka Strategy Conference for Hydrogen Energy established based on collaboration between industry, government and academic bodies.
- 2005 Established Hydrogen Energy Department.
- 2006 Began operations at Hydro Edge Co.,Ltd.
Organized first Hydrogen Energy Forum in Tokyo.
Received the Konstantin Tsiolkovsky Award from the International Association for Hydrogen Energy.
- 2007 Organized fuel cell and hydrogen vehicle touring event across Japan.
- 2009 Established Iwatani Industrial Gases Corporation's Chiba Plant, the first liquid hydrogen plant in eastern Japan.
Completed mobile power source vehicle equipped with pure- hydrogen fuel cells.
Received the Fuji Sankei Business i Prize at the 18th Global Environment Awards, in recognition of efforts to raise awareness of hydrogen energy.
- 2010 Organized Hydrogen Science Course 80 classes at elementary schools throughout Japan.
- 2011 Signed up to the Kitakyushu Hydrogen Town project organized by HySUT.
Issued a joint statement with 12 other countries, outlining plans to launch fuel cell vehicles onto the domestic market and improve Japan's hydrogen supply infrastructure.
- 2012 Installed solar hydrogen station at Saitama Prefectural Office.
- 2013 Completed the Toyota Eco Full Town Hydrogen Station for commercial demonstration with 70-MPa filling pressure.
Yamaguchi Liquid Hydrogen Corporation went into operation.
- 2014 Opened Iwatani Hydrogen Refueling Station in Amagasaki, Japan's first commercial hydrogen station.
Applying the exhaust gas processing technology we have developed over the years, we established the world's first fluorite synthesis technology in collaboration with the Nagoya Institute of Technology and Uedalime Manufacturing Co., Ltd. We also began operation of Iwatani Hydrogen Station Kokura, Kyushu's first commercial hydrogen station. In addition, we founded Sakai Carbonics, our fourth liquefied carbonic acid manufacturing plant in Japan.
- 2015 We established a new hydrogen-supply company in collaboration with Toyota Tsusho Corporation and Taiyo Nippon Sanso Corporation, and launched Japan's first commercial mobile hydrogen station through this company. We also opened Iwatani Hydrogen Station Shiba Park as a commercial hydrogen station near Tokyo Tower.



Iwatani
Iwatani Corporation