AIR WATER REPORT 2018

AIR WATER REPORT 2018

Meeting society's needs
with nature's blessings

Management Philosophy

Backed by an entrepreneurial spirit, we proudly dedicate ourselves and our resources to the creation and development of businesses linking air, water, and the earth.

The origins of the Air Water Group's business can be found in its name,
which consists of two words: "air" and "water."
We make use of the resources of our precious earth to create businesses
and contribute to society and everyday life.
Amid a business environment that continues to change at a dizzying pace,
we will continue to leverage the Group's collective capacities to tackle problems faced by
our customers and society, and will rise to the challenge of creating new value.

Contents

[Editorial Policy]

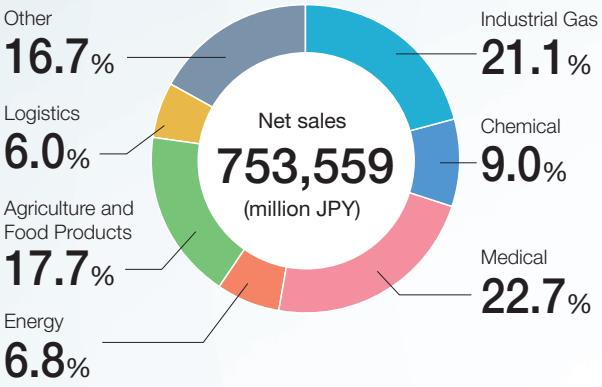
Starting from 2018, the Air Water Group's "Annual Report" and "Environmental and Social Report" have been integrated and published as this Air Water Report 2018. The aim of this Report is to clearly describe the social responsibility that the Air Water Group's broad range of businesses bear and its corporate value to society. The Air Water Group's unique CSR activities integral to management are summarized as the ESG (environment, society and governance) Report and their relationships with the global Sustainable Development Goals (SDGs) are presented in the Business Overview, demonstrating our management stance as a company engaged in businesses related to air, water, and the earth.

Forward-looking Statements (Business Risk Factors, etc.)

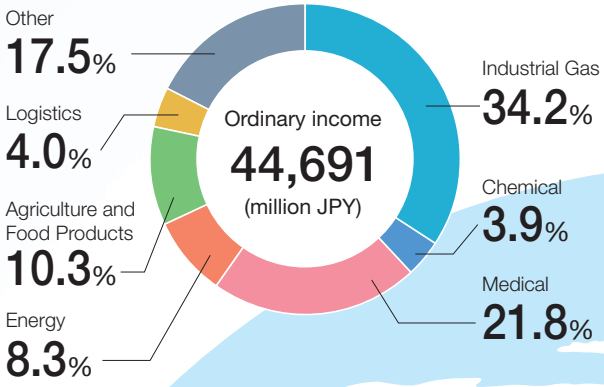
The forward-looking statements in this Report regarding estimates of business performance and predictions of future developments reflect Air Water's judgments based on currently available information, but do involve potential risks and uncertainties. Actual business performance could be significantly different from the projections made herein due to changes in various factors.

At a Glance

Sales by Business Segment (FY2017 Results)

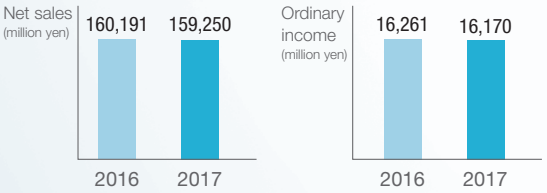


Ordinary Income by Business Segment (FY2017 Results)



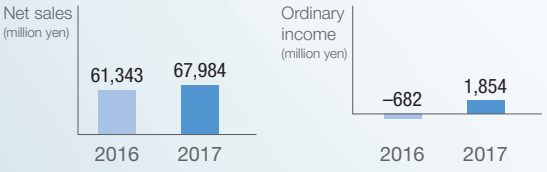
Industrial Gas

Industrial gases such as oxygen, nitrogen, and argon are used according to their respective properties in all stages of manufacturing and in everyday life, and thus support the very foundation of society. The Air Water Group stably supplies various industrial gases that meet customer needs through its sales bases and nationwide production network extending from Hokkaido to Kyushu.



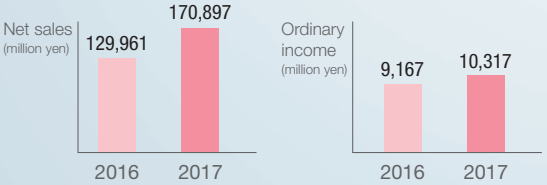
Chemical

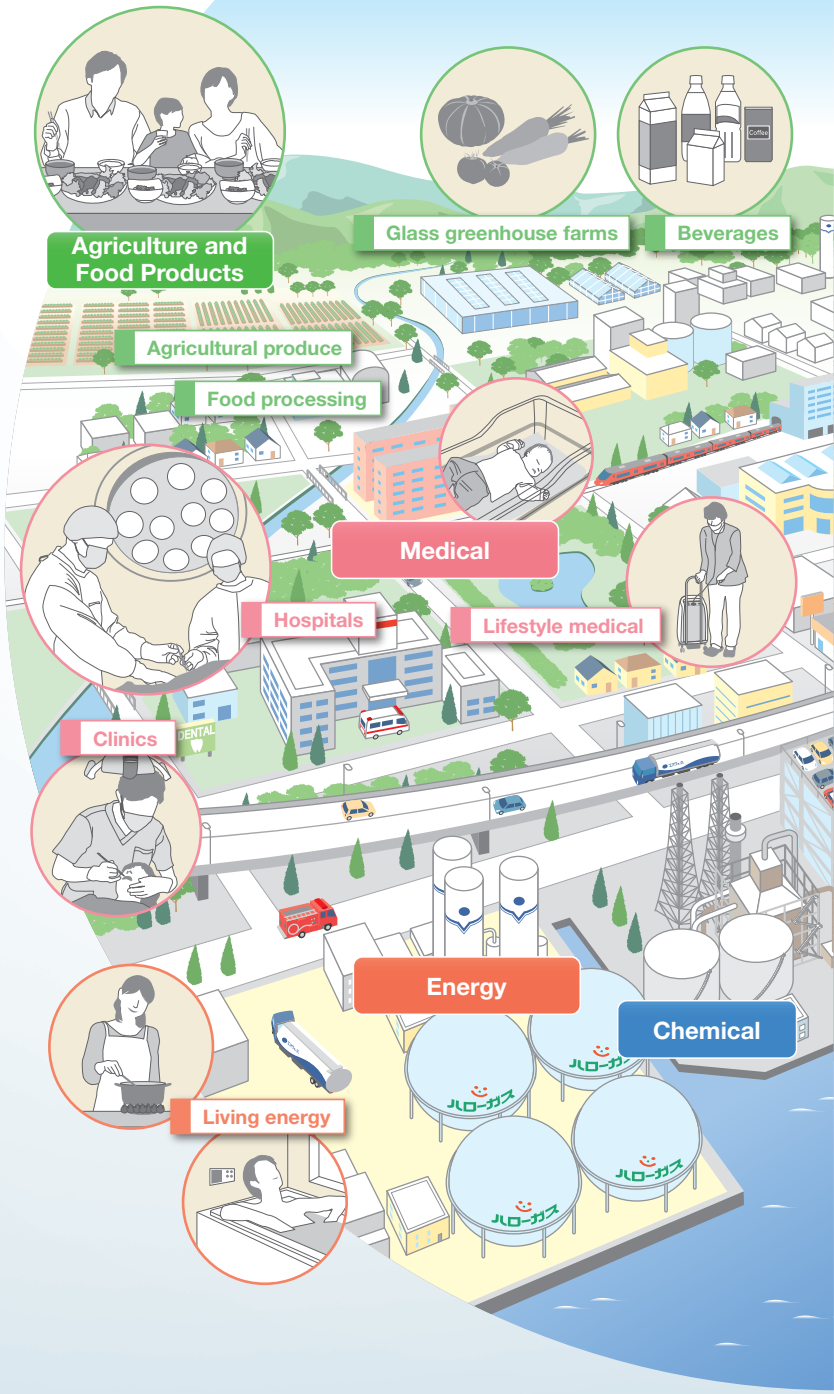
With the Coal Chemical business, which refines coke oven gas supplied by steelworks and manufactures chemical products, the Fine Chemical business, which creates high-quality products from organic compounds utilizing synthesis technologies, and Kawasaki Kasei Chemicals Ltd., which specializes in functional chemicals, Air Water can use its abundant knowledge and expertise to meet the diverse needs of its customers.

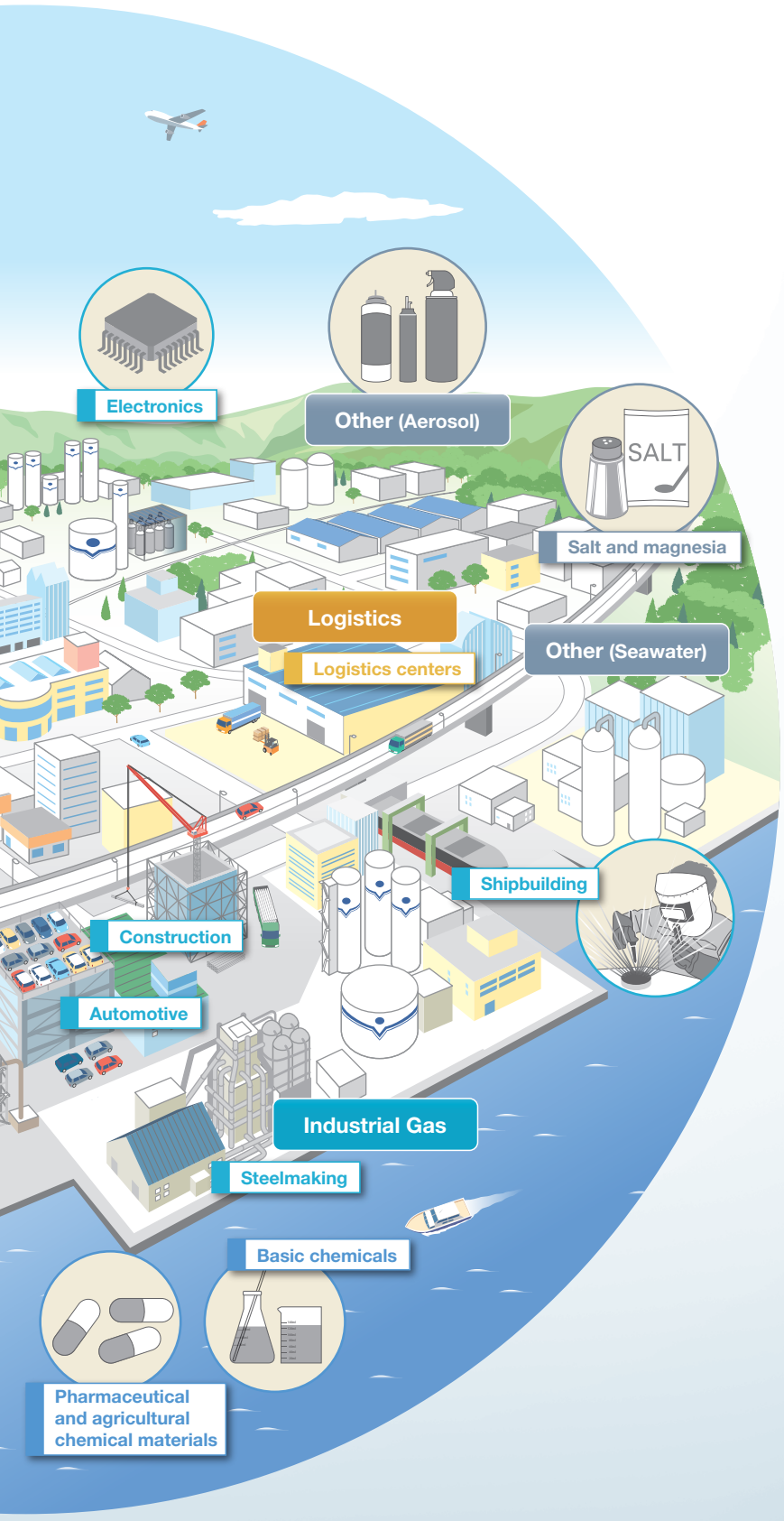


Medical

Besides provision of medical gases, Air Water offers comprehensive medical solutions from advanced medical care to everyday, general medical care. The Group has expanded its business domain to include the construction of hospital facilities such as operating rooms, respiratory and other medical equipment, SPD and contract sterilization, and medical, as well as sanitary materials, injection needles, and dental materials.

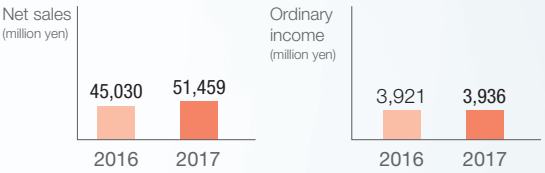






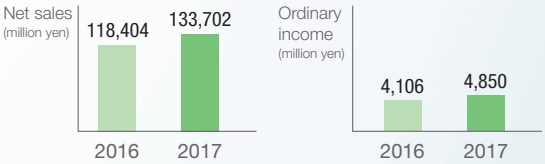
Energy

The Energy Business began in Hokkaido in 1955 with the goal of enriching people's lives. Today, Air Water operates the LP Gas and Kerosene businesses under the Hello Gas brand, still with the same aspiration. The company is also engaged in various other energy businesses, such as supplying LNG, manufacturing and selling LNG tank containers, and retailing electricity, as a comprehensive energy service provider.



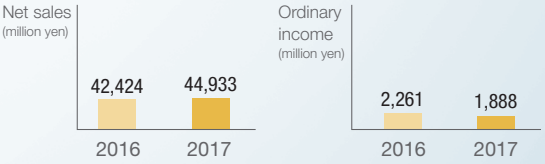
Agriculture and Food Products

The Food Products Business, which started with the sales of frozen foods utilizing liquid nitrogen, commenced full-scale participation in the agriculture sector in 2009. Since then the Group has delivered safe and secure food to customers in the three areas of "Agriculture," which covers everything from production and processing to distribution and sale, "Food Product Solutions," which involves the manufacturing and sale of ham, sausages, and sweets, and "Contract Beverage Production," especially of vegetable/fruit beverages.



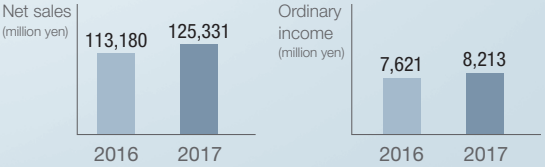
Logistics

Taking advantage of the low-temperature transportation technology accumulated in the transportation of high-pressure gases such as oxygen and nitrogen and the transportation of liquefied gas, Air Water operates comprehensive logistics businesses, including container transport between Hokkaido and Honshu, distribution services with warehouse functions, food logistics for retaining freshness through nuanced temperature control, medical logistics for transporting blood (plasma), and even the manufacturing of vehicles.



Other

With their unique, distinct products, these businesses underpin our concept of the Order Rodentia Style of Business. The Other Business segment incorporates myriad fields, including the Seawater business, which manufactures salt and magnesia derived from seawater elements, and the Aerosol business, which utilizes sophisticated gas technologies, as well as electronic materials, O-rings, and NV (metal surface treatment).



CEO Message

We will become a strong company always ready to innovate, satisfying the ever-changing needs of the world and its regions.

Masahiro Toyoda
Chairman and CEO

"Continuity and development" is a never-ending concern for public companies. The Air Water Group conducts its business activities under the strong conviction "no business without continuity, no business without growth." "Growth" lies at the heart of our identity. We believe that growth can be sustained if we are a "strong company" that is able to forget its successes and move forward, that is, to keep innovating.

Reminding ourselves of our management philosophy, we are now taking further steps forward as "a strong company that does work that is needed by the global community, with the spirit of innovation in mind."

Having launched various initiatives, including Group restructuring, to "create a strong company."

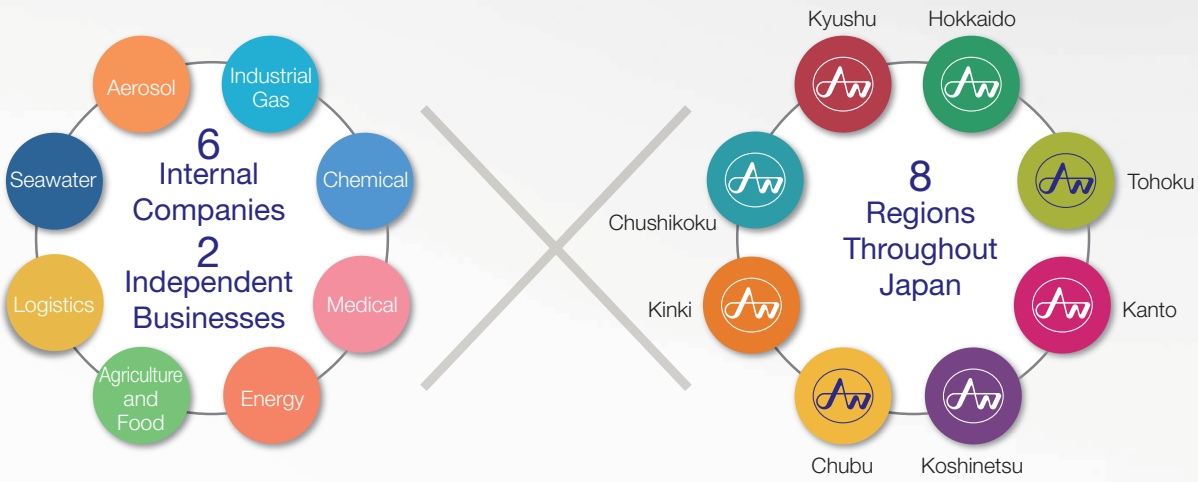
At a time when many companies were moving toward selection and concentration to reinforce their management structure, the Air Water Group opted to instead diversify its businesses. Every business has its ups and downs. Work related to products or services essential to people's lives will never disappear. Based on these two principles of our business philosophy, we decided to adopt the All-Weather Management System and the Order Rodentia Style of Business as the most efficient business approach.

This decision has proven successful. Our belief that growth can be sustained as long as we are a "strong company" not tied down by the past and able to continue to innovate has enabled us to constantly renew our business models and sustain our growth and development from the 1990s to the 2000s and up to today.

During this period, however, the Japanese market—the scale and innovativeness of which many major firms believed would be sustained—began to shrink and lose its capacity for innovation. With conservatism, or rigidness, now the dominant trend, there are no longer any vigorous players rushing to develop advanced technologies. Foreign investors, moreover, are clearly losing interest in the Japanese market, having withdrawn from several industries. In the future, single-person households will increase and the conventional form of the family may disappear in Japan. Accordingly, the everyday life of people, which is the

■ Conglomerate Management and Regional Business Strategies

The Air Water Group is further broadening its operations by combining conglomerate management centered on eight businesses with the functions of eight regional business companies.



area where the Air Water Group does its business, will also undergo dramatic changes. We must be fully aware of and tackle such ongoing changes by focusing greater attention on the principle of "growth = creating a strong company."

Based on this awareness, we launched the Management Reform 2017 program a year ago. While making sweeping changes to the management structure, including in relation to the COO, we promoted three key measures of "rebuilding the business portfolio," "strengthening regional business strategies," and "promoting diversity," with the aim of building a foundation for next-generation growth. In particular, the Air Water Group is further broadening its operations by combining conglomerate management centered on its eight businesses with the functions of eight regional business companies. This concept is very important as it provides the heading for the Group's rebuilding of its business portfolio.

Under these newly formulated management structure and strategies, we have launched various initiatives for fiscal 2018. Led by the president, the restructuring of the 246 Group companies is one of the initiatives with the highest priority. The ultimate goal of this initiative is to reduce the number of Group companies to around 60% of the current figure, though this is not simply for the sake of rationalization or liquidation but rather to make our corporate group stronger with sufficient margin. Through this restructuring, in which the growth potential of each business will be examined, we aim to enhance the innovative capabilities of each company and generate new growth potential.

Turning our attention to the world, for further continuity and development

Another important task for our sustainable growth is to become a company that satisfies expectations of all stakeholders. Recently, ESG investing has become increasingly popular and companies are placing greater and greater emphasis on ESG. Behind this trend lies the movements in line with the SDGs, a global action plan adopted at the United Nations Summit meeting for sustainable economic development. We have entered the era in which a company has no hope of growth without expectations from the global community.

Coincidentally, the Air Water Group declares in its Management Philosophy that we dedicate ourselves and our resources in creation and development of businesses linking to the earth. In other words, we have declared as our management principle to "work for the earth."

This forward-looking perspective regarding the global community is a crucial requirement for us to sustain continuity and development while satisfying expectations of all stakeholders. We must make our business performance consistent with this perspective, so as to become a company that deserves to proudly use the term "global community." To this end, we remind ourselves of our original point and aim to become "a strong company that does work that is needed by the global community, with the spirit of innovation in mind" through the united efforts of the entire Group.

CEO Message

Deepening ties with local communities

Meanwhile, the Air Water Group has regional business bases and markets developed for its original business in industrial gases. We have fostered the companies involved in our regional business by encouraging them to implement fully autonomous management, maximizing the efficiency of their respective business operations. And by organically combining them with each other, we have achieved prosperity and growth as a group. For this achievement, we have placed the highest priority on establishing companies that are rooted in local communities and match the local characteristics.

We must continue to be rooted in local communities and think from local perspectives, thereby satisfying local expectations in order to sustain our growth. In this sense, it is crucial to find businesses rooted in local communities, across different business types or fields, and develop them as our new businesses. I believe that the generation of various innovations from the development of businesses closely tied to local communities will usher in an astonishing future.

Personnel reform focused on education and training

In fiscal 2018, personnel reform is also a task of the highest priority. We must put into practice positive personnel management, with which individual potentials are discovered, developed, and utilized for business management, seeing human resources as resources of the company. Human resources development is a pillar of business management and we are required to implement the personnel policy reform focused on education and training. The ultimate goal of the reform is to establish diversity in human resources.

To appropriately respond to today's rapid changes, employees with different ideas and abilities are crucial. Now that diversity is becoming more and more important, the Air Water Group has a great advantage for the future as it has established diversity in its basic strategy of the Order Rodentia Style of Business. To make best use of this advantage, we will promote mobility of human resources broadly within the entire Group, and establish a system in which each individual is encouraged to autonomously build his/her career according to his/her will. The five-year program to promote women in the workplace launched in fiscal 2016 is also making steady progress. We will continue to think about what we can do as a company to provide each individual with the best environment for their self-fulfillment.

Pioneer the future through personnel training to deepen diversity

Future is generated from present.

A recent project led mainly by our young employees to think about Air Water 30 years from now concluded as follows: "Air Water can become a corporate entity with infinite possibilities that is more and more needed by the world. In relation to natural resources, we will consistently identify public needs, combine technologies, and nimbly connect diverse businesses. The products and solutions generated from this will enable us to be closely linked to people's lives, local communities, and industries, and to continuously respond to the needs of society. 'Meeting society's needs with nature's blessings' should be the corporate vision of Air Water."

On this note sounded by the next generation, I would like to conclude my message.

Masahiro Toyoda
Chairman and CEO

COO Message

Further promote reform and growth by enhancing engineering and R&D capabilities, with a view to overseas expansion

Kiyoshi Shirai
President and COO

Backed by favorable tailwinds, we will take further strides forward.

In fiscal 2017, our overall business environment was favorable, supported by a growing, albeit moderately, domestic economy and a steadily growing global economy, though with some uncertainties. As a result, our consolidated net sales were 753.6 billion yen, an increase of 83.0 billion yen from the previous year. Operating income was 42.4 billion yen, up 1.1 billion yen from the previous year, and ordinary income was 44.7 billion yen, up 3.4 billion yen. Net income was 25.2 billion yen, an increase of 2.8 billion yen from the previous year. All marked a substantial increase from the previous year and made new record highs.

In comparison with the initial plan, however, the targets for fiscal 2017—which were 760.0 billion yen for net sales, 44.0 billion yen for operating income, 44.0 billion yen for ordinary income, and 24.0 billion yen for net income—were not fully achieved.

Under the one-trillion-yen-company vision, the Air Water Group has made steady steps toward this goal. And we will not change this goal.

The targets for fiscal 2018 are 820.0 billion yen for net sales, 48.5 billion yen for operating income, 50.0 billion yen for ordinary income, and 28.0 billion yen for net income, all of which would again set new records. We will make all-out efforts to achieve these targets.

■ Consolidated Forecast for FY2018

Item	FY2016	FY2017 (Actual)	FY2018 (Forecast)
Net sales	670.5	**753.6**	820.0
Operating income	41.3	**42.4**	48.5
Ordinary income	41.3	**44.7**	50.0
Profit attributable to owners of parent	22.3	**25.2**	28.0

(billion yen)

COO Message

We will enhance engineering and R&D capabilities, two pillars that support our growth strategies.

In fiscal 2017, in line with the launch of Management Reform 2017, our management structure was totally renewed. In the new management framework, I was appointed chief operating officer (COO), and the President's Office was established to oversee the Corporate Planning and the Public Relations & IR departments as well as Research and Development Institute. The President's Office, an organization directed by the COO, serves to bundle the group businesses together to generate synergy and smooth the way to achieve further growth. A broad range of information on the Group is gathered at the President's Office, enabling us to quickly resolve issues through unified management of information and implement proactive information strategies.

Based on the idea of "look beyond tomorrow to the coming future, create an image for Air Water as a whole, and take charge of today," I am doing my best at all our business sites in guiding the formation of the Group structure and fulfilling my duties as COO.

This fiscal year, I would like to place a particular focus on the improvement of the technological capabilities of the entire Group. As a preparatory step, last year I put Research and Development Institute under the control of the President's Office, and promoted the rejuvenation of the institute's personnel and a review of research themes. This year, our aim is to support the advancement of R&D activities by paying sufficient attention to creating an environment in which researchers can be aware, in conducting their research, of the social significance, ultimate business vision, marketability, financial contribution to the company, etc. of their research themes.

Another pillar that supports our growth strategies is engineering. We initiated an engineering reform last year, setting up the Engineering Integration Department in April to oversee engineering at all Group companies. In November, we set up at each company an organization in charge of engineering. This organizational structure is aimed at generating new products through technological improvement and advancement. Now that our businesses are increasingly diversified, it is crucial for the sustainable growth of the Air Water Group as a competent manufacturer that each of its companies own and develop its own engineering capabilities. We are determined to produce concrete results from this reform as soon as possible.

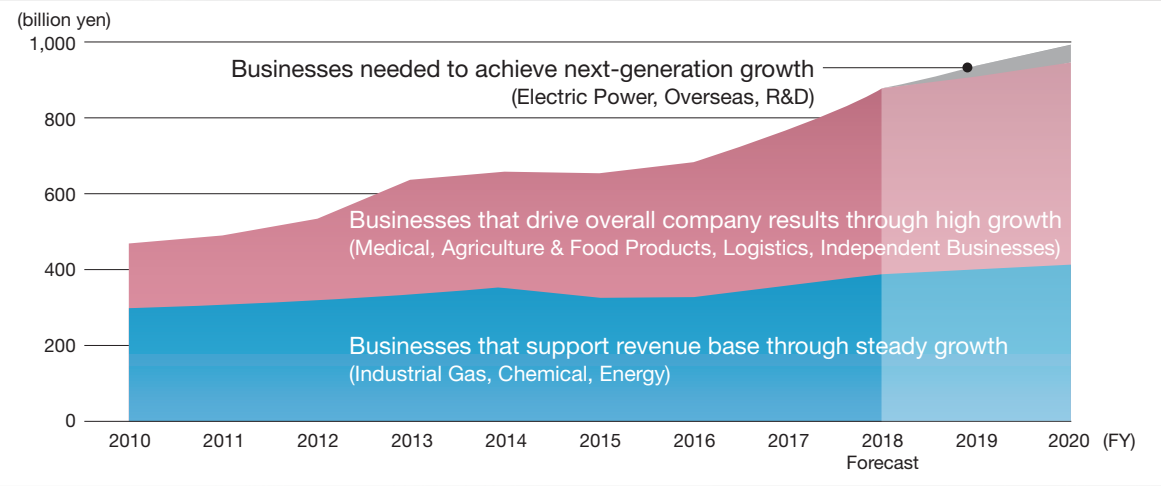
The Engineering Integration Department also began a project of building a network for engineering, technology, and services among the three bases of Japan, North America, and Asia. The aim of this project is to establish a system to support the Air Water Group's global expansion, and maintain and enhance the manufacturing/production technologies that support its growth strategies, thereby securing the Group's competitive advantage. In June this year, we also newly appointed a director in charge of Engineering Integration Department. The overseas sites focused on engineering are expected to serve as the bases that will firmly support the Air Water Group's overseas businesses in the future.

Preparatory measures to raise the ratio of overseas businesses, with a view to "further growth post2020"

The Air Water Group's consolidated overseas net sales are approximately 30 billion yen at present, accounting for less than 5% of total sales. Starting from fiscal 2020, however, we are planning to make full-fledged efforts to raise the ratio of our overseas businesses. We have already started preliminary activities, such as overseas launch of engineering-related operations and the enhancement of businesses of existing overseas subsidiaries. To strategically expand overseas businesses, the Group needs to have a function to monitor and analyze the overseas businesses of all Group companies and report to top management. Thus, this August Global Business Dept. became a staff section in charge of overseeing all of the Group's overseas businesses.

The Air Water Group's continuous growth is supported by "restructuring of existing businesses" and "M&A-based growth

■ Business portfolio in growth strategies (net sales)



strategies." M&A similarly plays an important role overseas. However, M&A overseas is undeniably associated with higher risk than in Japan. Therefore, for each overseas M&A deal, its feasibility is examined by the relevant company while its adequacy and business risks are analyzed and managed by the Global Strategy Office in close cooperation with the Head Office's administration division. With this system, we will ensure the security of our overseas M&A deals.

Aiming to be a corporate group with enduring growth

The Air Water Group is steadily implementing various initiatives for further growth and development in each of its business fields, with a view to achieving its vision of becoming a one-trillion-yen company by fiscal 2020 and further growth post-2020.

Among them, "restructuring of existing businesses" and "M&A-based growth strategies" are particularly important as two pillars driving the development of the Air Water Group.

We consider the Industrial Gas, Chemical, and Energy businesses as the "existing businesses" that support our revenue base through steady growth, and we are strengthening these fields with investment to renew and upgrade facilities, and restructuring.

In the Industrial Gas segment, for example, we will strongly promote the VSU strategy centered on increasing gas production at VSU plants and expanding cylinder filling stations by allying our eight regional business companies across Japan with leading partners in each region. In the Chemical Business segment, which has been vulnerable to market fluctuations, we are implementing the restructuring of businesses, including transfer of the Coal Chemical business.

Meanwhile, the Medical, Agriculture and Food Products, Logistics, and Other businesses are positioned as pillars for future growth, and we are working to expand their scale through proactive investment centered on M&A and capital investment.

In the Medical Business segment, considering the increasing elderly demographic in Japan, we will focus particularly on expanding the consumables businesses, such as sanitary materials and dental care, in the lifestyle medical field, as well as our conventional field of Advanced Medical business, such as hospital facilities. In the Agriculture and Food Products Business segment, we will promote decentralization of production to stabilize earnings, capital investment to save manpower, and the expansion of individual business domains, mainly vegetable processing. In the Logistics Business segment, we will further enhance our logistics businesses led by low-temperature logistics, one of the Air Water Group's strengths, by establishing a nationwide network of our own logistics centers, while implementing various measures to integrate logistics operations within the Group.

In addition to these initiatives, to foster businesses that will provide next-generation growth beyond fiscal 2020, Air Water has identified the three management issues of "electric power business," "strengthening overseas strategies," and "the establishment of a new technology-driven company," and is making strategic investments aimed at future business development.

Through the concerted effort of our businesses pursuing these growth measures, we will achieve our vision of becoming a one-trillion yen company by fiscal 2020 and further growth into the years beyond, thereby securing sustained corporate growth, which forms the core identity of the Air Water Group.

The Air Water Group will enhance the diversity of its businesses and take on challenges for the future with unique strategies. I would sincerely ask for your continued understanding and support for our Group.

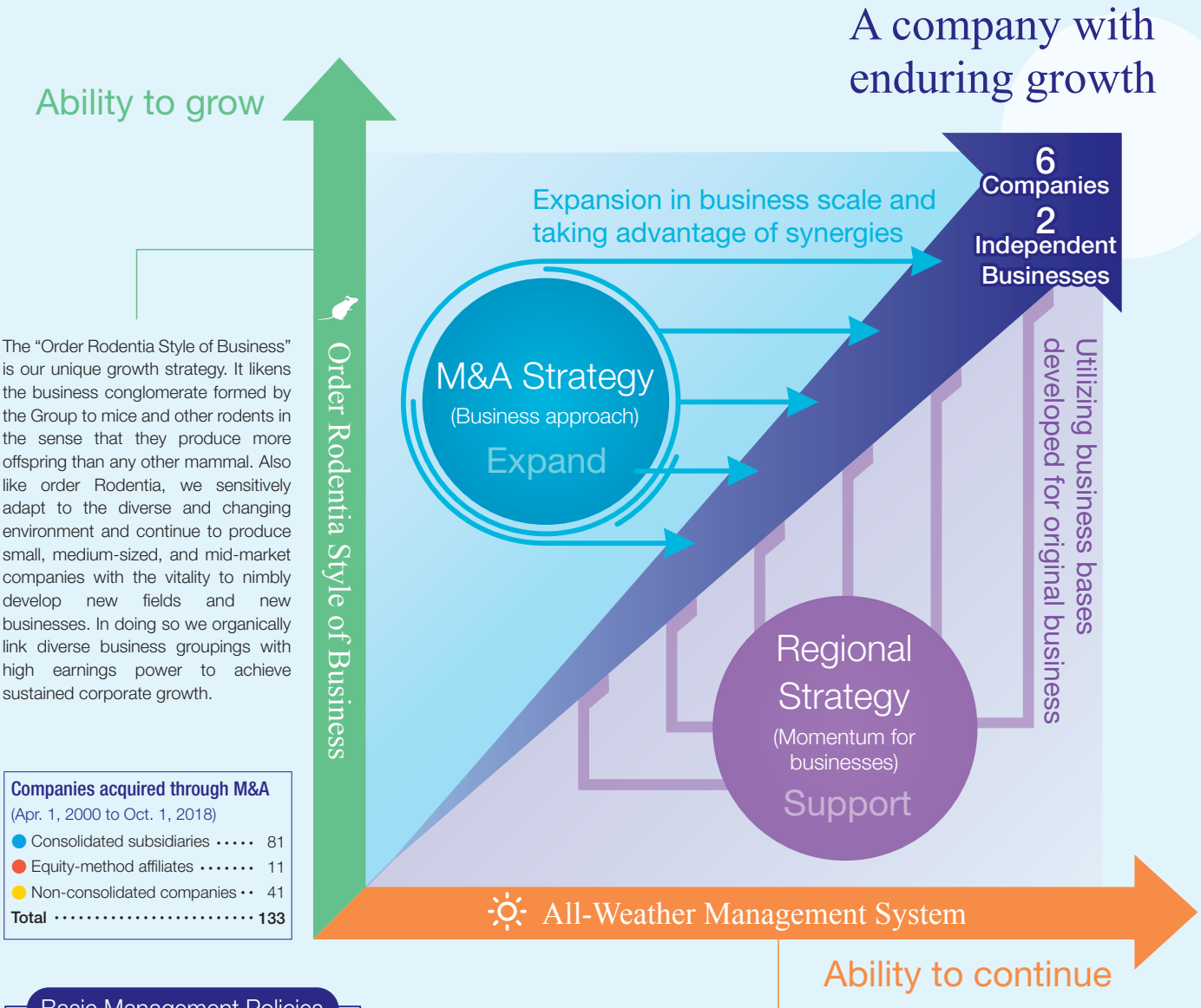
Kiyoshi Shirai

Kiyoshi Shirai
President and COO

Aiming to be a company with

Air Water's Business Model

"Continuity and development" is a never-ending concern for a company. In line with its Management Philosophy, Air Water aims to become a company with enduring growth by acquiring diverse businesses through M&A while creating new value by taking advantage of its solid regional business bases developed for its original business, based on the unique management principles of the All-Weather Management System and the Order Rodentia Style of Business.



The "Order Rodentia Style of Business" is our unique growth strategy. It likens the business conglomerate formed by the Group to mice and other rodents in the sense that they produce more offspring than any other mammal. Also like order Rodentia, we sensitively adapt to the diverse and changing environment and continue to produce small, medium-sized, and mid-market companies with the vitality to nimbly develop new fields and new businesses. In doing so we organically link diverse business groupings with high earnings power to achieve sustained corporate growth.

Companies acquired through M&A
(Apr. 1, 2000 to Oct. 1, 2018)

Consolidated subsidiaries	81
Equity-method affiliates	11
Non-consolidated companies	41
Total	**133**

Basic Management Policies

Order Rodentia Style of Business
×
All-Weather Management System

Group of order Rodentia, outlasting any weather and continuing to grow

The Air Water Group is diversifying its businesses and reinforcing its earnings power to establish an "All-Weather Management System" that can produce stable growth in any operating environment. We will continue to pursue balanced expansion of our industrial businesses, such as industrial gas and chemical, and our lifestyle-related businesses, such as medical, agriculture and food products, and logistics, and form a business portfolio unaffected by changes in the operating environment to achieve sustained growth.

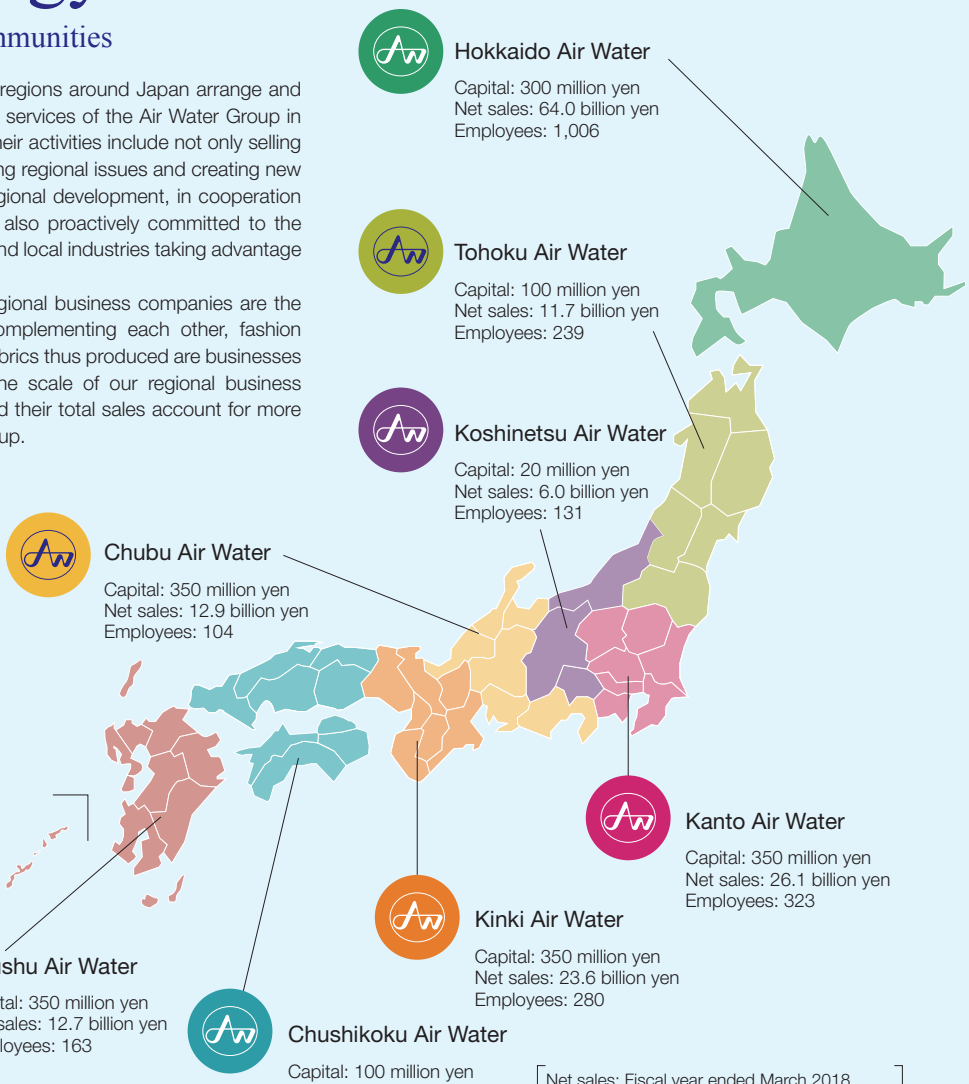
enduring growth

Regional strategy:

rooted in and growing with local communities

Our regional business companies operating in eight regions around Japan arrange and deliver a wide variety of technologies, products, and services of the Air Water Group in response to the needs of markets and customers. Their activities include not only selling the Group's products and services, but also unearthing regional issues and creating new products and business models that contribute to regional development, in cooperation with Air Water and its Group companies. They are also proactively committed to the creation of businesses to support people's lifestyles and local industries taking advantage of regional characteristics.

The eight businesses are the warp and the eight regional business companies are the weft. The warp and the weft, overlapping and complementing each other, fashion businesses with perfect strength and elasticity. The fabrics thus produced are businesses with unique regional textures and colors. Today, the scale of our regional business companies is over 10 billion yen in seven regions and their total sales account for more than a quarter of the total for the entire Air Water Group.



Hokkaido Air Water
Capital: 300 million yen
Net sales: 64.0 billion yen
Employees: 1,006

Tohoku Air Water
Capital: 100 million yen
Net sales: 11.7 billion yen
Employees: 239

Koshinetsu Air Water
Capital: 20 million yen
Net sales: 6.0 billion yen
Employees: 131

Chubu Air Water
Capital: 350 million yen
Net sales: 12.9 billion yen
Employees: 104

Kanto Air Water
Capital: 350 million yen
Net sales: 26.1 billion yen
Employees: 323

Kinki Air Water
Capital: 350 million yen
Net sales: 23.6 billion yen
Employees: 280

Chushikoku Air Water
Capital: 100 million yen
Net sales: 10.7 billion yen
Employees: 154

Kyushu Air Water
Capital: 350 million yen
Net sales: 12.7 billion yen
Employees: 163

Net sales: Fiscal year ended March 2018
Employees: As of March 2018, including contract employees, etc.

M&A strategies in regional business companies

Air Water has expanded its business scale and created synergies under the M&A strategies. In recent years, as the regional business companies have been achieving steady growth under the regional strategies, they have begun to take the initiative in conducting M&A.

M&A is an important business approach not only for Air Water but also for the regional business companies. Air Water and regional business companies are both continuing to grow under the same strategies.

<M&A deals by regional business companies>

- Acquisition of the garage business of Nikko Kinzoku Co., Ltd. by Hokkaido Air Water (consolidated)
- Acquisition of Omori-medical Co., Ltd. as subsidiary by Chubu Air Water (consolidated)
- Acquisition of Maruden Miuradenki Co., Ltd. as subsidiary by Hokkaido Air Water (non-consolidated)
- Conclusion of capital and business alliance with Sapporo Dental Group by Hokkaido Air Water (non-consolidated)

Contribution to society by regional businesses closely linked to regional communities

M&A strategies and regional strategies are inseparable growth strategies of Air Water, and the close ties with local communities inarguably form the core of regional businesses. Air Water believes that the reason for having regional business companies is because they are able to think for themselves about growth in local communities from a regional perspective. Aiming to become companies that are rooted in local communities and that match the local characteristics; growing businesses that are rooted in local communities—in the course of achieving these goals, regional business companies communicate know-how on M&A to local communities and support local companies suffering from a lack of successors. Each regional business company will continue growing along with the people of its local community, being firmly rooted in the region and having a vision for an enriched future.

As a company engaged in businesses

Social issues

Earth
◎ Energy/ resources shortage
◎ Environmental pollution/ destruction

People
◎ Aging
◎ Food safety and security management
◎ Stagnant manufacturing

Dedicate ourselves and our resources to resolving social issues

Creating new value with technologies utilizing natural resources

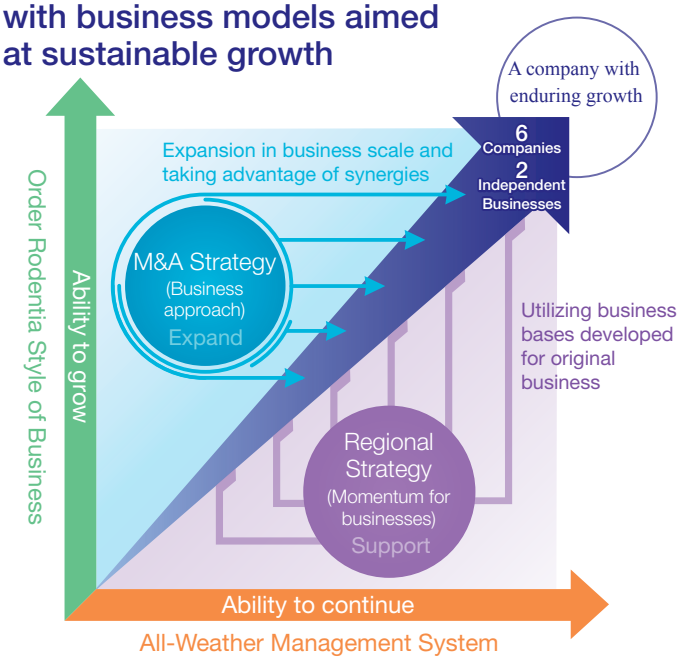
Air

Water

Broad range of technologies and synergy effects

- Gas processing technologies
- Gas application technologies
- Gas collection/ recycling technologies
- Electronic materials technologies
- Plasma surface treatment technologies
- Welding technologies
- Low-temperature equipment technologies
- Energy solution technologies
- Fine chemical technologies
- Functional resin and carbon materials technologies
- Medical technologies
- Agriculture and food products technologies
- Metal surface treatment technologies
- New materials technologies
- Numerical analysis technologies

Business continuity and development with business models aimed at sustainable growth



Creation and development of businesses

We contribute to resolving social issues by dedicating ourselves and our resources

related to air, water, and the earth

<Businesses and major products/services>

Closely related SDGs

Industrial businesses

Industrial Gas Business
Oxygen, nitrogen, argon, and other industrial gases, industrial machinery, plant manufacturing, etc.

Chemical Business
Gas purification and basic chemicals, carbon materials, fine chemicals (agricultural chemicals, pharmaceutical and agricultural intermediates, etc.)

Energy Business
LPG, kerosene, LNG, energy-related devices, etc.

Lifestyle-related businesses

Medical Business
Medical gases, hospital facilities, medical devices, medical services, home medical care, hypodermic needles, dental and sanitary materials, etc.

Agriculture and Food Products Business
Agriculture and produce distribution and processing, frozen foods, contract beverage production, etc.

Logistics Business
Logistics for high-pressure gases, food products, medical products, etc., manufacture of specialty vehicles, etc.

Seawater Business
Salt, environmental products, water treatment, magnesium, etc.

Aerosol Business
Aerosol products (items for human body such as cosmetics, industrial items such as paint, etc.)

Other Businesses
Electricity, environment-friendly artificial recycled wood (ECOROCA®), metal surface treatment (NV), O-rings, etc.

Contributing to resolving social issues

Creating social value

Customers

- Manufacturing companies
- Food products companies, restaurant chains, etc.
- General consumers, ordinary people
- Retailers, etc.
- Medical institutions, nursing care facilities, etc.

Social value

- Provision of materials, products, and services that support advanced manufacturing
- Provision of medical and nursing care products and services in response to population aging and medical advances
- Stable provision of safe and secure food products
- Provision of energy, products, and services for a low-carbon society
- Provision of products and services that contribute to reduction of environmental load

to the creation and development of businesses linking air, water, and the earth.

Feature 1

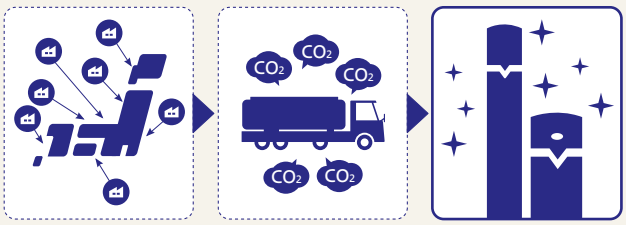
Industrial Gas Business responsible for stable supply of industrial gases, the lifeline of industry, maintaining sustainable growth

Air Water manufactures industrial gases and supplies them in various ways, ranging from delivery of a single cylinder to on-site supply using gas generation equipment, that are best suited to each customer's conditions of use. Recently, gas users have been increasingly setting up operation sites all over Japan, making long-distance delivery of liquefied gas very important. In 2003, Air Water succeeded in the development of the "VSU," a compact liquefied oxygen and nitrogen production plant, which had been considered unrealistic. With VSUs achieving high performance almost equivalent to that of a large plant, by installing them adjacent to every area of demand Air Water has established an innovative business model for industrial gas supply. VSUs are being installed in more and more locations around Japan, leading the growth of Air Water's industrial gas business.

VSU (high-efficiency, compact liquefied oxygen/nitrogen production plant) for Local Industrial Gas Production for Local Consumption Realizes Stable Supply, Energy Conservation, and Environmental Friendliness

The "VSU" is a regional liquefied gas plant unique to Air Water that simultaneously achieves stable supply, energy conservation, and reduction of CO_2 emissions through its establishment on the outskirts of a region in which customers are located. Conventionally, industrial gases are generally produced at large plants and transported long-distance by tanker trucks to areas of demand nationwide. This is because the gas production apparatus that could be installed in small plants were energy-inefficient, making production costs unreasonable. The development of a high-efficiency, compact liquefied gas plant had been a difficult theme that no one was expected to achieve. But Air Water's development team tackled this difficult challenge using technologies of the company.

They successfully achieved the key breakthrough by introducing innovative ideas and technologies, such as a high-efficiency turbine and the vacuum insulation system.



Increase in industrial gas consumption and distribution of user sites

Increase in costs and CO_2 emissions due to longer-distance transport of gases

VSU has enabled high-efficiency gas production near areas of demand

Features of VSU

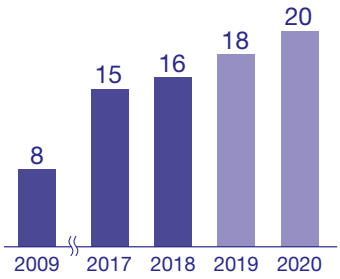
1. **A compact plant enabling high-efficiency liquefied gas production**
   - The introduction of unique technologies, such as the high-efficiency turbine and vacuum insulation system, has substantially reduced power consumption.
2. **Stable supply ensured by production near places of demand**
   - Enables agile response to local demand for gases, such as medical gases for hospitals.
   - Adequate backup can be provided in an emergency, such as a natural disaster.
3. **Logistics rationalization and environmental improvement due to substantial reduction of transportation distance**
   - Reduction of CO_2 emissions associated with transportation
   - Reduction of energy consumption and environmental load due to reduction of investment in delivery vehicles
4. **Partnerships with local major industrial gas suppliers**
   - New business models can be created through joint ventures with local firms that fully understand local industries and demand structures.

Regional liquefied gas plant with energy efficiency as high as that of a large plant

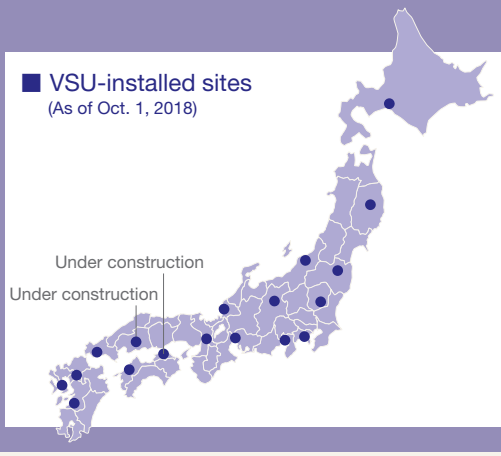
"VSU," a high-efficiency, compact liquefied oxygen/ nitrogen production plant (Since 2003)

16 plants in 2018, to 20 plants in 2020

■ No. of VSU-installed sites



■ VSU-installed sites
(As of Oct. 1, 2018)



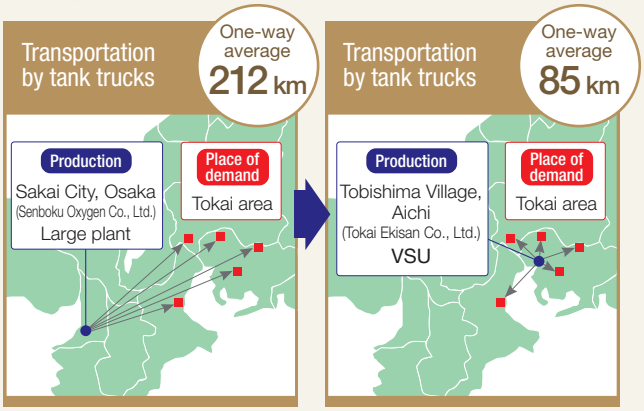
An innovative gas supply model achieving logistics rationalization and environmental load reduction

The greatest advantage of installing VSUs is that the transportation distance involved in getting gas to customers (places of demand) can be substantially reduced compared to that of gas supply by large plants. As well as reducing the transportation costs due to the reduction in investment in delivery vehicles and energy consumption, VSU contributes greatly to the reduction of environmental load by reducing CO_2 emissions associated with transportation.

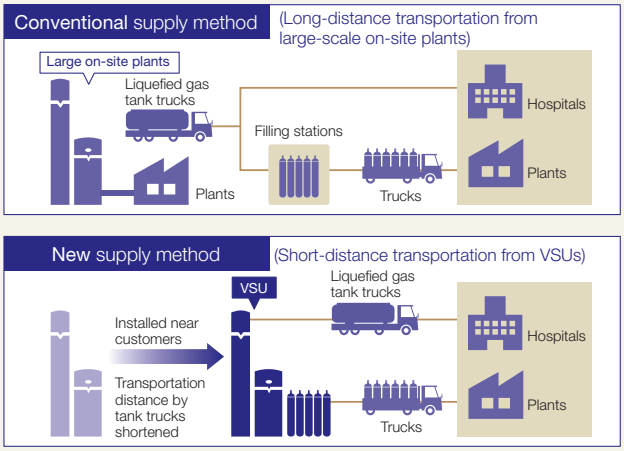
In the case of transportation for the Tokai area, for example, gases were conventionally transported by tank trucks from a large plant in Osaka Prefecture. After the installation of a VSU in Aichi Prefecture, the transportation distance was shortened from 212 km to 85 km on average one way, that is, two-fifths of the conventional distance.

VSUs have also brought about a significant effect in the reduction of environmental load. The CO_2 emissions cut by the VSU project have reached approx. 3,000 tons annually.

■ Example of distance reduction (Tokai area)



■ Substantial reduction of transportation distance by VSU



Setting up new VSU sites and promoting local partnerships

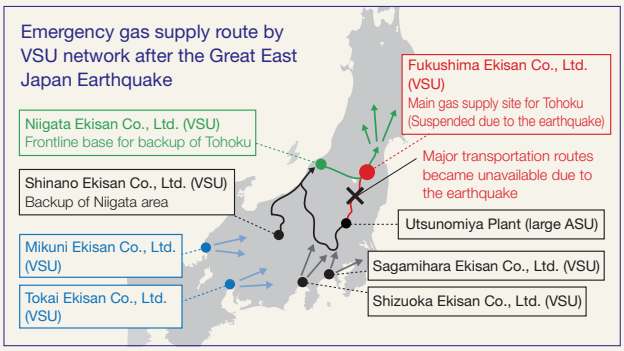
Another unique feature of this business model is that VSUs are set up through joint ventures with local industrial gas suppliers in each region. By establishing partnerships with such major suppliers, the VSU project plays a significant role in formulating new gas supply networks that Air Water did not have before. Local firms are reliable partners well acquainted with the demand structures unique to the region, and promoting local partnerships contributes to regional industries.

Cooperation with local partners is also effective in the reduction of transportation costs. Tank trucks owned by local dealers, which had been operated at around 50% of capacity, were put into joint use, achieving the operating rate of 100%. This benefited the local partners.

At present, VSUs are operating at 16 sites around Japan and under construction at two further sites. We are planning to further expand the VSU-installed areas.

Distributed placement, the VSU's most unique feature, contributes to customers' business continuity plans

The VSU not only plays an important role in ensuring the stable supply of industrial gases according to demand in each region, it may also substantially reduce the risk of a gas supply route being cut off in the event of a disaster. This is due to its most unique feature: distributed placement. In the aftermath of the Great East Japan Earthquake, multiple liquefied gas plants in the Kanto and Tohoku areas were shut down due to equipment breakage and power failure. Gas filling plants were also suspended due to power failure and disruption of the water supply. Under these circumstances, the VSU network played a crucial role. The VSU gas supply sites that had been distributed nationwide supported gas supplies in each area, thereby minimizing the impact on customers and contributing greatly to the business continuity plans (BCPs) of customers. In the face of frequent occurrences of large-scale natural disasters, the VSU is tremendously effective in preventing supplies of medical oxygen for hospitals from being stopped and the production lines of companies from being suspended in all kinds of situations.



Feature 2

Medical Business expanding its domain and continuing to grow, in response to growing medical needs worldwide

Medical needs keeping expanding both in advanced countries, where the population is increasingly aging, and in developing countries, where people's standard of living is rising. The Air Water Group conducts a broad range of businesses in both fields of Advanced Medical business and Lifestyle Medical business, with the aim of responding comprehensively to diverse medical needs. In accordance with the scenario toward becoming a one-trillion-yen company by 2020 by maintaining steady performance in industrial businesses while driving growth in lifestyle-related businesses, the Group actively promotes M&A and restructuring in the Lifestyle Medical business. In fiscal 2017, the "Other" subsegment of the Medical Business segment marked the highest growth rate. Above all, the Injection needle business has tremendous potential.

Injection needle encapsulated in containers flowing along the packaging line

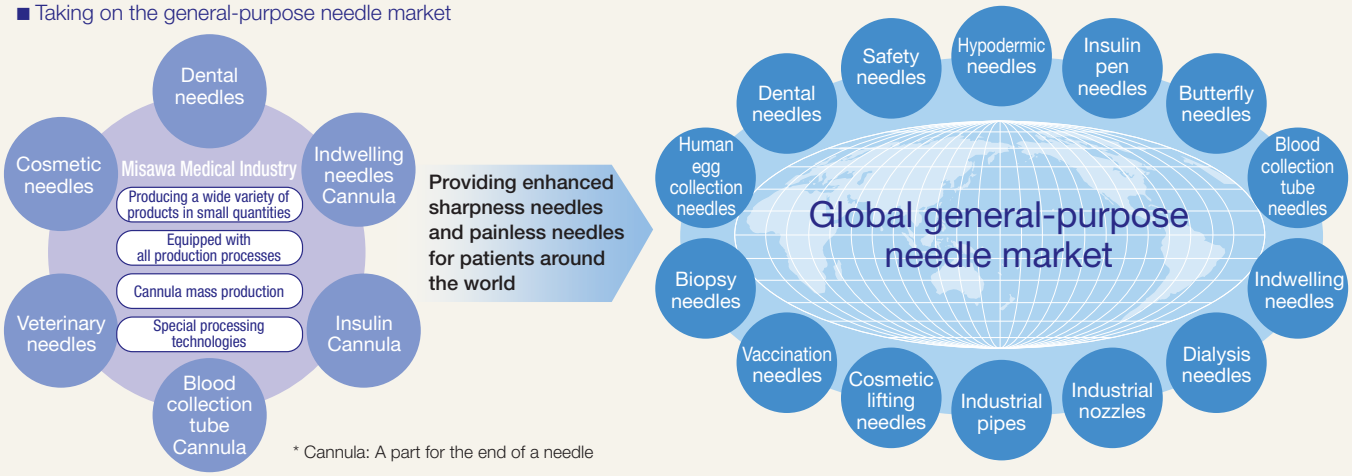
Injection Needle Business to Become a Top Global Brand with Comprehensive Capabilities in Technology, Quality, and Services

— Misawa Medical Industry Co., Ltd. —

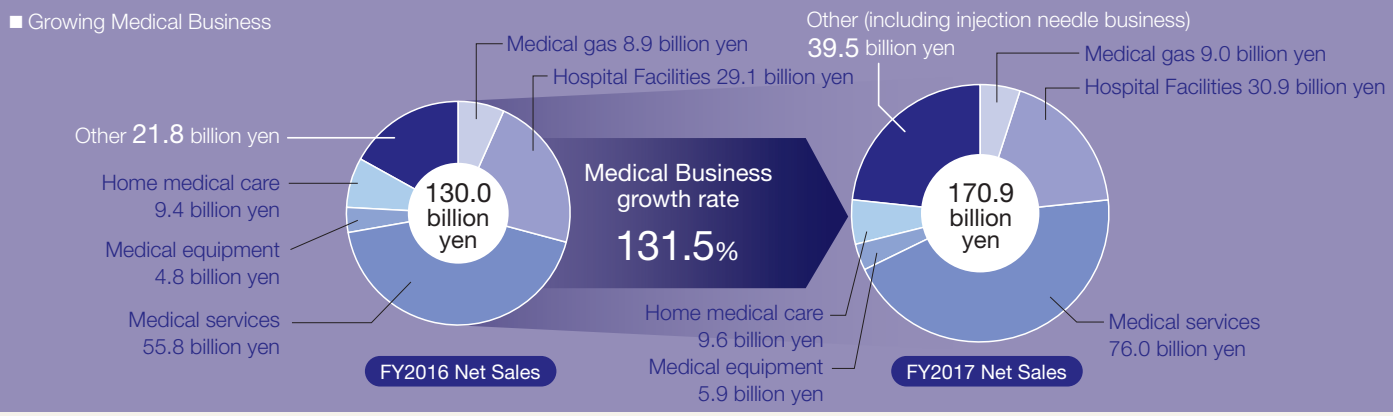
Misawa Medical Industry Co., Ltd. is a injection needle specialist company boasting over 50 years of history. It is one of the few manufacturers in Japan in possession of all processes for syringe manufacturing, and also has highly specialized needle processing capabilities. Approximately 80% of the company's products are for overseas. Based on technologies, quality, and services that are recognized as those of a global brand, Misawa challenges the limits of possibilities for injection needles, aiming to satisfy the needs of all people.

Diverse injection needles produced by Misawa Medical Industry

■ Taking on the general-purpose needle market



* Cannula: A part for the end of a needle



Diverse injection needles used in medical care settings Global market scale of approx. 70 billion needles a year

Injections, for vaccination, blood collection, and anesthesia at dental clinics, etc., are necessary to maintain health. Needles are used in a great many situations, such as intravenous drip injection, dialysis, biopsy, collection of cerebrospinal fluid, removal of ascites, and collection of eggs for artificial insemination. Everything in the form of a pipe to be stuck into a site somewhere on the body is categorized as an injection needle. Needles therefore play the role of a pipe that connects the body to the outer world.

Approximately 70 billion needles, including dental needles, cosmetic needles, and veterinary needles, are sold annually around the world. In Japan, approximately 12 billion needles are produced annually, of which around one billion are used within the country.

Demand expanding mainly in developing countries New needles expected to dramatically change medical treatment

Demand for injection needles is expanding globally. Due to the spread of medical care associated with the improvement in living standards in developing countries, more and more countries need a large amount of injection needles to be used for vaccination and medical care, making the injection needle business bigger and more international.

There are also new and diverse social needs for injection needles. For example, easy-to-use and painless injection is needed for vaccination or diabetes treatment, while expectations are growing for microneedling*, which has been used in practical applications in the cosmetics industry.

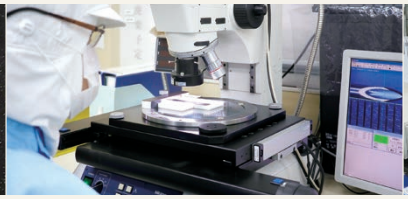
* A procedure in which numerous very fine drug-coated needles are placed on a sheet and the sheet is placed over human skin to administer the drug. In the cosmetics industry, soluble microneedles, which will melt away after a certain amount of time, have also been developed.

In addition to the strength of unique technologies, pioneering the future as a global brand through the creation of new value

As a company in command of all processes necessary to manufacture syringes, we always pay attention to patients. Misawa Medical Industry has pursued the development of “painless needles” over a long period of time. It has established various unique technologies, such as innovative forms of needle points and silicone oil coating that can be prepared according to the needle specifications. At the same time, the company has refined the technologies for needle processing and mass production so as to be capable of producing a large amount of advanced injection needles. Taking advantage of such technological strength, we aim to contribute to the improvement of QOL of patients, and contribute also to the enhancement of medical care around the world by properly identifying the medical environment and genuine demand in each country and responding to needs for quality and cost.

In addition to our new attempts for the improvement of quality and production capacity, we are also encouraging the use of our technologies in businesses of other Group companies so as to create synergies.

Fine needle point grinding with unique technology



Needle point inspection with a microscope

Molding line for resin parts (needle hub)

Assembly of needles and hubs

Misawa’s development capabilities supporting its quality

Our company owns all the processes necessary for the manufacture of syringes, which means that we are able to manage in detail the quality assurance and costs by ourselves. Apart from honing this unique quality assurance system, we will further enhance our development capabilities covering not only products but also production processes. Integrated manufacturing, as well as the ability to design production facilities within the company, is the basis of the Misawa brand quality and is a great strength for a syringe manufacturer. We will invest human resources in development, with the aim of contributing to the future of injection needles.

Yusuke Okamoto
Quality Assurance Director

Strength fostered by responsibility and pride in contributing to medical care

Today, Misawa Medical Industry focuses on the fields of dental, cosmetic, and transplantation of fertilized ovum for livestock as three pillars that are supporting the future growth of the company. At the same time, we see cooperation with other companies in the same industry as important, and provide them with all kinds of materials, products, and services produced by our integrated production lines, meeting all requests in terms of range and quantity. This unique characteristic constitutes our strength, the basis for social contribution through business. “This single needle I am producing may save a life.” With this belief always in mind, all Misawa employees are working hard to improve the quality of manufacturing with a sense of pride and responsibility.

Yoshito Mashiko
Sales Director

Industrial Gas Business

Summary of FY2017

Solid gas demand continued in broad manufacturing fields in Japan. In addition, the VSU* strategy, centered on increasing gas production at VSU* plants by enhancing ties with leading regional partners, proved successful. These resulted in steady performance by the Industrial Gas Business, especially for gas supply using cylinders or tank trucks. On-site gas supply for electronics purposes and sales of gas application equipment also showed steady performance. In the engineering field, Japan Pionics Co., Ltd., a proven supplier of gas purifiers and waste gas cleaners, joined the Air Water Group.

Meanwhile, on-site gas supply for blast furnaces was affected by unstable operation at a customer plant due to equipment failure and a rise in electricity rates.

As a result of these, total sales for the segment were 159.25 billion yen (99.4% of the previous year), with ordinary income of 16.17 billion yen (99.4% of the previous year).

* A high-efficiency compact liquefied oxygen/nitrogen production plant

Outlook for FY2018

In Japan, steady gas demand is expected to continue across a broad section of the manufacturing industry. The Industrial Gas Business will increase and enhance the VSUs and other gas production sites, as well as the cylinder filling stations, thereby further promoting gas businesses in Japan. The central plant for helium production will commence operations in Kawasaki City in May, while Kakogawa Plant, which commenced operations in fiscal 2017, will reinforce its manufacturing facilities for rare gas (xenon, krypton), for which demand has been increasing. Moreover, the Industrial Gas Business will further promote sales of gas applications and other non-gas products, while building up business foundations in North America and Asia by utilizing overseas subsidiaries such as TOMCO$_2$ Systems Company and Taylor-Wharton Malaysia Sdn. Bhd.

Major Measures for FY2018

Industrial Gas Business

- Promoting the VSU-centered strategy and promoting local partnerships
- Expanding sales of carbon dioxide and dry ice
- Expanding sales of non-gas products (QuickSnow, welding robot)
- Expanding sales of specialty materials for electronics

Engineering Business

- Enhancing initiative to improve cost competitiveness centered on new Sakai Plant
- Building up foundations in North America and Asia by utilizing overseas subsidiaries

TOPICS

"QuickSnow" precision cleaning system using carbon dioxide

QuickSnow is a dry cleaning system that produces fine dry ice particles from liquid carbon dioxide and injects them from the nozzle at high speed so that they collide with precision components or substrates in order to remove particles (micron-level fine dust or dirt) and organic substances from them. When fine dry ice particles collide with a target object, they vaporize and increase in volume by a factor of approximately 750. The QuickSnow system utilizes this property to blow away particles and clean organic substances.

The development of a system that utilizes fine dry ice particles for cleaning began with the introduction of technologies of overseas manufacturers. Based on those technologies, in order to respond to the needs of semiconductor manufacturers in Japan, Air Water has developed unique technologies, such as a nozzle that is able to efficiently clean objects in complicated shapes.

QuickSnow adopts a dry-type cleaning process that uses no liquid, such as solvents or chemical fluids. This means there is no wastewater or waste liquid to be treated and no need for drying, which reduces the environmental load and minimizes damage to target objects such as substrates, making the system suitable for the cleaning of fine areas. Moreover, the carbon dioxide used is manufactured by purifying gas by-products discharged from chemical plants or steelworks. Through the development and sales of QuickSnow, Air Water thus contributes to the reduction of environmental load and effective use of resources.

"QuickSnow" dry cleaning system

Business Overview and Features

The Industrial Gas Business delivers a stable supply of industrial gases, such as oxygen, nitrogen, argon, and carbon dioxide, by the optimum supply method, ranging from supply using cylinders or tank trucks to on-site supply. The Industrial Gas Business also offers gas applications, as well as engineering and industrial equipment, by making effective use of technologies developed in-house.

<Closely related SDGs>

- Stable supply of industrial gases
- Reduction of environmental load by improving plant efficiency
- Reduction of CO_2 emissions associated with transportation

● Types of Gas

Oxygen	Nitrogen
Argon	Carbon dioxide
Hydrogen	Helium
Rare gas	Welding gas
Xenon, Krypton, Neon	ELNACKS, DIE ARGON, AW SHIELD, HOKUSEAL
Cutting gas	Others
DIETHYLENE, DIE CUT, DIE LASER, Acetylene	High-purity Ammonia, Ethylene Oxide, Semiconductor Specialty Gas, Stable Isotopic Gas, etc.

Industrial Gas

On-site Supply

Air Water installs gas generation equipment on the premises of steelworks and chemical plants that require a large volume of high-purity oxygen or nitrogen and provides gas supply through pipelines.

Mini On-site Supply

Air Water ensure stability of supply to industries with medium-scale demand such as the electronics industry by installing small- to medium-scale gas generation equipment such as the V1, which manufactures high-purity nitrogen gas.

Supply by Tank Trucks

Air Water delivers various types of liquefied gas produced at manufacturing plants to customers' plants. Thanks to its supply network covering the whole of Japan, Air Water has established a secure and safe supply structure.

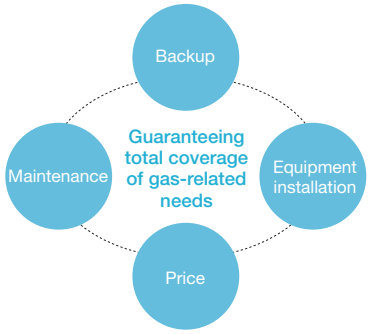
Cylinder Supply

Air Water supplies cylinders, gas cylinder bundles, LGC (ultra low-temperature liquefied gas containers), etc. to various local industries by the method most appropriate to usage and purpose.

Gas Total System

Realizing stable gas supply while satisfying customer needs

It is immeasurably convenient and secure for customers to have gas generation equipment installed on their premises. Under Air Water's Gas Total System, Air Water is responsible for installing gas generation equipment to provide an on-site gas supply. Gases are produced on-site using the electricity, cooling water, and instrumentation air provided by the customer, and sold under a supply guarantee. The system comprehensively covers all gas-related needs, from installation cost estimation to troubleshooting as well as maintenance and backup services. We offer an optimum system suitable for the needs of each customer.



Equipment and Construction

Industrial Equipment

Air Water supplies industrial equipment related to welding and cutting, such as ELNACKS®, an argon-based gas for welding, and offers welding solution services.

Gas Applications

Air Water develops and proposes gas equipment and systems that effectively use the properties of industrial gases to contribute to its customers' improvement of production efficiency or sophistication of technology.

Engineering

Air Water offers integrated solutions based on the process engineering of cryogenic air separation systems, from design and fabrication to safety management. With the completion of Sakai Plant in December 2017, the machinery production structure has been reinforced.

Chemical Business

Summary of FY2017

In the Coal Chemical business, although the processing volume for coke oven gas refinement decreased, the unit price for purified gas rose due to changes in market conditions, resulting in an increase in net sales. Conditions for the Tar Distillation business conducted by C-Chem Co., Ltd., an equity-method affiliate, improved due to a tightening supply and demand balance for needle coke for electric furnace electrodes.

The Fine Chemical business showed steady performance with a recovery in earnings as a result of the suspension of unprofitable facilities and growth in sales of high-function circuit products for industrial robots. Kawasaki Kasei Chemicals Ltd. also marked favorable performance as a whole, with a substantial increase in sales of quinone-based products for uses such as agricultural chemicals and photosensitizers, as well as recovery in sales of phthalic anhydride and improved export market conditions.

As a result of these, total sales for the segment were 67.984 billion yen (110.8% of the previous year), with ordinary income of 1.854 billion yen (the previous year marked a loss of 0.682 billion yen).

Outlook for FY2018

Market conditions for the Chemical Business have been improving thanks to a rise in crude oil prices and other favorable factors. In the Coal Chemical business, along with the recovery in operation of steelworks, a recovery in earnings is expected for crude benzene and other basic chemicals. The Fine Chemical business will accelerate withdrawal from unprofitable products and adjustment of prices of pharmaceutical and agricultural intermediates to appropriate levels, while expanding product sales. At Kawasaki Kasei Chemicals Ltd., steady sales of quinone-based products are expected to continue, and profitability will be further improved due to structural reform for organic acid products, such as phthalic anhydride.

Major Measures for FY2018

Overall
- Reinforcing and expanding the functional chemicals business foundations

Fine Chemicals
- Promoting withdrawal from unprofitable products and price increase

Kawasaki Kasei Chemicals Ltd.
- Structural reform for organic acid products
- Expanding sales of quinone-based products

TOPICS

Transfer of Coal Chemical business decided to achieve shift to a functional chemicals-centered business structure

The Chemical Business, which commenced with purification of coke oven gas in relation to ironmaking and sales of its by-products, has fostered various unique businesses, such as the carbon materials business for automobiles and building materials, and the Fine Chemical business, which deals with intermediates for various materials, such as pharmaceutical and agricultural intermediates, and information and electronics materials. Later, it established C-Chem Co., Ltd. as a joint venture with Nippon Steel & Sumikin Chemical Co., Ltd. to conduct the Tar Distillation business. In 2015, Air Water acquired as its subsidiary Kawasaki Kasei Chemicals Ltd., a manufacturer and seller of phthalic anhydride, a general-purpose chemical, and functional chemicals, especially naphthoquinone and other quinone-based products, with the aim of enhancing areas other than the Coal Chemical business.

Meanwhile, the Coal Chemical business is vulnerable to fluctuations in market conditions and the supply-demand balance, and its raw materials procurement is also easily influenced by the operation status of steelworks. Considering the business scale of Air Water and the impact of changes in the business environment on its overall business performance, it appeared difficult for Air Water to promote structural reform of the business on its own. Under these circumstances, Air Water decided to withdraw from the joint venture for tar distillation by agreeing to have Nippon Steel & Sumikin Chemical Co., Ltd. (now Nippon Steel Chemical & Material) acquire C-Chem Co., Ltd. as its fully owned subsidiary in April 2018, and to then transfer the Coal Chemical business to Nippon Steel & Sumitomo Metal Corporation and Nippon Steel & Sumikin Chemical Co., Ltd. as of April 1, 2019.

We will accelerate the shift in our business structure to transform ourselves into a company with a strong presence in the functional chemicals field by devoting focused efforts to enhancing the existing quinone-based products and other unique products utilizing the carbon materials and liquid air oxidation technologies, while injecting external resources through proactive M&As.

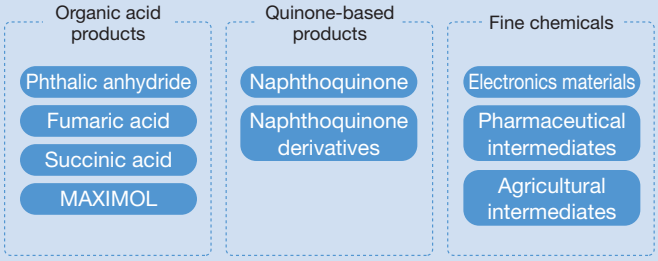
Business Overview and Features

The Chemical Business develops and produces high value-added chemical products, including functional chemicals such as fine chemicals and quinone-based products, general-purpose chemicals such as organic acid products, and MAXIMOL, which is used for rigid polyurethane foam, and delivers a stable supply of them.

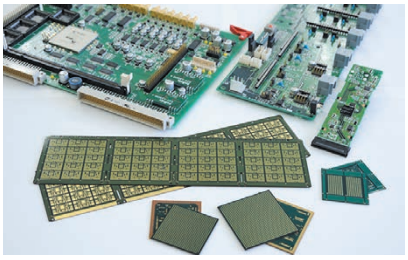
<Closely related SDGs>

- Development and production of pharmaceutical and agricultural intermediates
- Reduction of greenhouse gases through provision of products

(Kawasaki Kasei Chemicals Ltd., MAXIMOL, SAQ)



Chemical



Electronics Materials

Liquid air oxidation, nitration, and other synthesizing technologies are utilized to manufacture semiconductor sealant SK Resin. Semiconductor substrates and general-purpose circuit boards are also manufactured and sold.

Pharmaceutical and Agricultural Intermediates

The Group's strong arsenal of heterocyclic compounds, which play an important physiological role, are used in the synthesis of various derivatives to meet the diverse development needs of customers.

Kawasaki Kasei Chemicals Ltd.

Since its foundation in 1948, Kawasaki Kasei Chemicals has manufactured intermediates for building materials, electronics materials, food products, and pharmaceutical and agricultural products. It also handles a range of organic acid products, such as phthalic anhydride, and functional chemicals including quinone-based products.

List of Products of Kawasaki Kasei Chemicals Ltd.

	<Raw materials>		<Major uses>
Organic acid products	Ortho-xylene	Phthalic anhydride	Vinyl chloride plasticizers Paint Polyester resin Pigment
	Maleic acid	Fumaric acid	Polyester resin Bath agents Food additives Pharmaceutical products
	Maleic anhydride	Succinic acid	Bath agents Food additives Biodegradable plastic
Organic acid products derivatives	Various organic acids	MAXIMOL	Rigid polyurethane foam Surface-active agents Resin modifiers
Quinone-based products	Naphthalene	Naphthoquinone	Agricultural chemicals Pharmaceutical chemicals Dye intermediates Resin Desulfurization catalysts
		Naphthoquinone derivatives	Pulp digesting assistant Photosensitizers Agricultural chemical materials Polymerization inhibitors

Medical Business

Summary of FY2017

In the Advanced Medical field, which targets general hospitals and other medical institutions as customers, business related to the construction of hospital facilities such as operating rooms was stable thanks to efforts for cost reduction and other factors, despite the extremely challenging market conditions due to a decrease in large projects. The SPD (in-hospital logistics and inventory management system) business in the medical services segment achieved an improvement in earnings due to new orders for large-scale projects and streamlining of management. Sales of medical gases were also firm due to acquisition of new customer hospitals.

In the Lifestyle Medical field, which provides products and services in areas closer to consumers, the home medical care, dental, and sanitary materials businesses saw steady growth. The injection needle business, which expanded sales channels overseas through M&A, marked steady performance while the business of GLOBALWIDE, a Singapore-based hospital interior and facility installation company acquired by M&A, also contributed to favorable sales results.

As a result of these, total sales for the segment were 170.897 billion yen (131.5% of the previous year), with ordinary income of 10.317 billion yen (112.5% of the previous year).

Outlook for FY2018

Faced with an accelerating trend for holding down medical expenses at hospitals and other medical institutions, Air Water will further enhance the infrastructure for businesses targeting medical institutions, such as outsourcing of hospital operations. At the same time, efforts will be made to expand the businesses in the Lifestyle Medical field, which is expected to keep growing in line with the aging of society. Taking advantage of its comprehensive capabilities to respond to all medical needs ranging from advanced medicine to lifestyle medicine, Air Water will endeavor to receive combined orders. Moreover, the Medical Business will promote restructuring of subsidiaries with the aim of optimizing the functions and business resources of subsidiaries in the areas that have been rapidly expanded due to M&As, thereby further improving productivity and efficiency in business management.

Major Measures for FY2018

- Restructuring of Group companies to improve efficiency and creating new businesses/synergies
- Expanding business and improving productivity by active capital investment
- Improving profitability by all-out cost reduction efforts
- Expanding medical consumables businesses (sanitary materials, injection needles)
- Promoting overseas businesses

TOPICS

Offering products/services that respond to growing interest in oral care

Oral health is the key to a healthy and long life. Being able to eat orally keeps you healthy not only physically but also mentally, and helps improve your quality of life. To maintain your oral health, daily care is necessary. In this super aging society, there is growing interest in oral care for its power to promote healthy living.

Ci Medical Co., Ltd., an equity-method affiliate of Air Water, delivers dental care products to various clinical institutions, mainly dental clinics and orthodontists, through mail-order sales. It consistently develops, plans, sells, and manufactures products that are user-friendly from a dentist's point of view. Under the principle of making both dentists and patients happy, Ci Medical offers meticulously developed products to support daily care.

For elderly people whose oral self-care ability is declining, daily oral cleaning, moisturizing, and functional training are necessary to prevent aspiration pneumonia. Kawamoto Corporation, an Air Water Group company, offers a diverse lineup of products, including an oral care gel and oral care sponge. With quality that has long been chosen and appreciated in many medical and nursing care settings, it fully supports oral care from beginning to end.

Products of
Ci Medical Co., Ltd.

Products of
Kawamoto Corporation

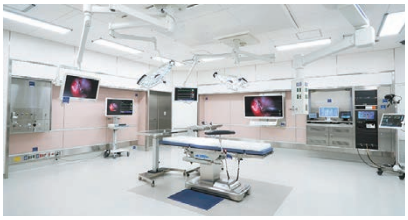
Business Overview and Features

The Medical Business provides diverse products and services, ranging from the latest equipment for hospitals on the increasingly sophisticated frontlines of medicine and the supply of medical gas, medical outsourcing services, and equipment and maintenance services, to the supply of products and services for community clinics and home care, such as dental items, sanitary materials, and injection needles.

<Closely related SDGs>

- Providing products and services for advanced medical treatment
- Providing lifestyle-related products
- Contributing to the enhancement of infrastructure through disaster prevention projects

Advanced Medical

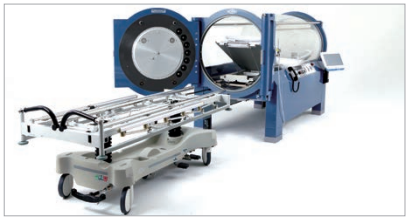


Hospital Facilities

Air Water has a leading share in design and installation of operating rooms and intensive care units (ICUs), which are core features of hospitals, and of gas supply facilities such as medical gas piping. Optimal medical environments are created by utilizing our extensive experience and cutting-edge technologies.

Medical Services

Air Water helps hospitals to operate more efficiently by providing medical outsourcing services to support hospital management and operations, including in-hospital logistics management and the sterilization or disinfection of medical instruments.



Medical Equipment

Air Water provides a broad range of products and services, including mainly ventilator-related equipment, as well as cardiovascular and nursing care equipment, and maintenance thereof. In February 2018, Kairos Co., Ltd., the developer of a very small and light rigid endoscope with 8K resolution, joined the Air Water Group.

Advanced Medical

Medical Gas

Through its nationwide supply network, Air Water delivers a stable supply of medical oxygen, for which it holds a leading share in Japan, and a variety of other medical gases, such as nitric oxide products, liquefied helium for MR imaging, and sterilization gas.

Lifestyle Medical

Home Medical Care

Air Water helps patients with respiratory problems to live comfortably every day through home oxygen therapy, which involves breathing in air that contains more oxygen than normal using a home oxygen concentrator.

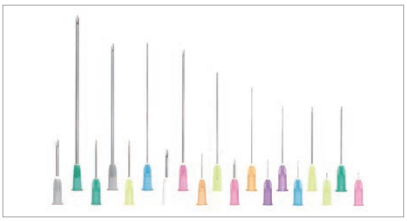
Sanitary Materials

Air Water has strength in the development of products with special features such as sterilized gauze and sterilized BEMSHEETS, which are mainly used in operating rooms, and it is also putting effort into products for general consumers such as oral care products and baby products.

Lifestyle Medical

Dental

Air Water manufactures and sells dental and orthodontic equipment and materials mainly to dental clinics and orthodontists. It is also engaged in mail-order sales of dental care products in general.



Injection

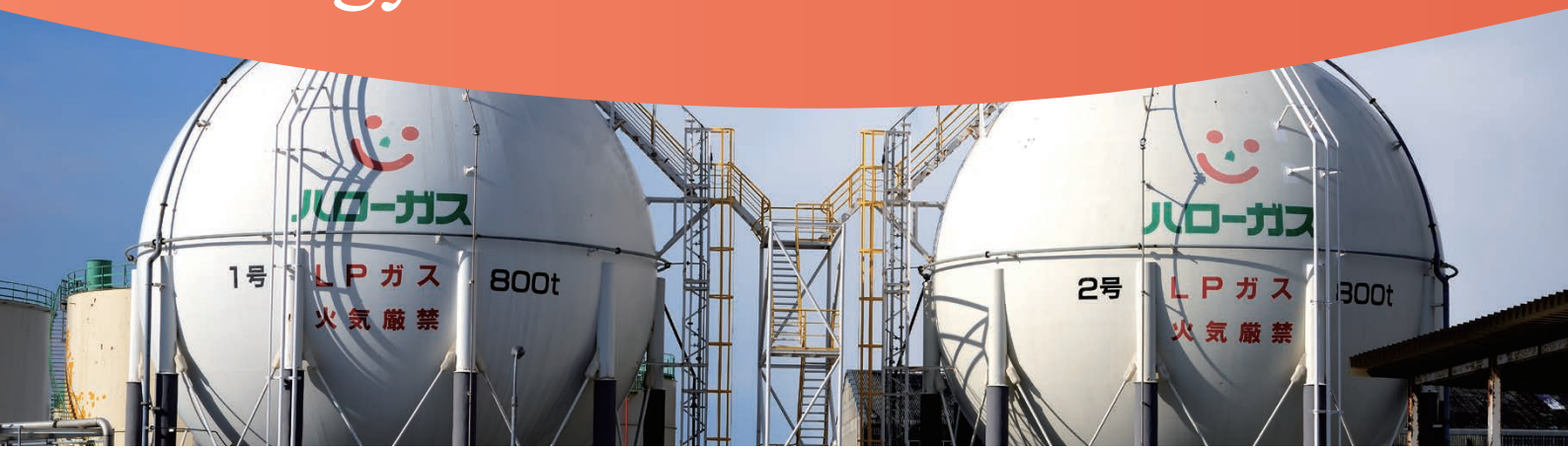
Air Water manufactures general hypodermic needles as well as a variety of other needles for dental, cosmetic, and veterinary purposes using outstanding grinding and machining technologies in Japan, and exports them to over 80 countries around the world.

Disaster Prevention

Disaster Prevention Projects

Air Water helps protect society from disasters through supplying fire extinguishing equipment using nitrogen or other gases and air respirators to protect human life from smoke and toxic gases.

Energy Business



Summary of FY2017

For LP gas and kerosene, the Energy Business focused on increasing the sales volume and improving the ratio of direct sales through the acquisition of commercial rights. Efforts were also made to acquire new customers, such as the launch of a new point-awarding service for general households. For industrial LP gas, Air Water promoted fuel conversion from heavy oil in line with the enhancement of the supply structure. As a result of these efforts, which boosted the sales volume, along with a rise in selling prices in connection with CP prices, net sales increased. However, the profit level remained about the same as the previous year due to an increase in sales promotion costs and the impact of a substantial decline in CP prices after the fourth quarter.

In businesses other than LP gas and kerosene, orders for renewal of water heaters and other related equipment, as well as gas heat pumps (GHP), steadily increased, while deals for LNG tank trucks using ultra low-temperature technology, a strength of Air Water, advanced as planned.

As a result of these, total sales for the segment were 51.459 billion yen (114.3% of the previous year), with ordinary income of 3.936 billion yen (100.4% of the previous year).

Outlook for FY2018

Faced with population decrease and competition from all-electric houses, the environment surrounding LP gas for civil use has been increasingly tough. The Energy Business will continue to promote various measures to increase both sales volume and customers, including the acquisition of commercial rights to raise the ratio of direct sales and the enhancement of customer services. At the same time, it will also push for fuel conversion to industrial LP gas through enhancing ties with regional business companies across Japan.

Moreover, the Energy Business will commence external LNG sales and electricity retailing in collaboration with Hokkaido Electric Power Company, and will also focus on new uses and fields, including supply of materials for new LNG vehicles, which are being developed by major truck manufacturers, and bunkering (fuel supply for ships).

Major Measures for FY2018

Energy for households

- Expanding direct-sale customers by M&A to acquire commercial rights and enhancing customer services
- Evolving into a general energy service provider, starting with entry into electricity retailing business

Energy for industry

- Promoting sales of industrial LP gas by taking advantage of strength as an industrial gas manufacturer
- In view of the expected market expansion, focusing on LNG-related equipment

TOPICS

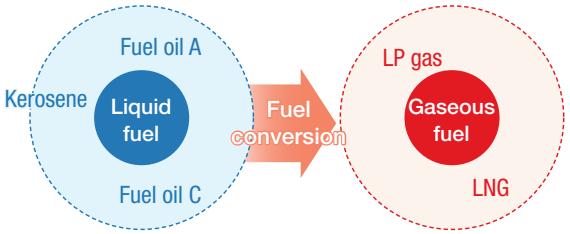
Contributing to a low-carbon society by pushing for fuel conversion

The Air Water Group is actively promoting fuel conversion to LP gas or LNG for customers using fuel oil by presenting a simulation of costs and financial advantages.

For customers of industrial gas, who often own plant facilities, Air Water offers proposals by using the sales networks of its eight regional business companies while also working to enhance the supply system by deploying its own tank trucks.

LP gas and LNG show a significant economic advantage outside the areas where pipeline supply of city gas is available. LP gas is suited for energy demands of a relatively small scale while LNG better satisfies large-scale demand. Air Water offers proposals tailored to the needs of each type of customer. Other advantages of the gaseous energy of LP gas or LNG gas compared to fuel oil include higher fuel efficiency and less carbon dioxide, sulfur, and nitrogen in exhaust gas.

The world has been shifting away from conventional, liquid fuel-dependent energy toward clean gaseous energy with a view to the realization of a low-carbon society. Air Water contributes to the realization of a low-carbon society through its initiatives to promote fuel conversion.



Clean energy

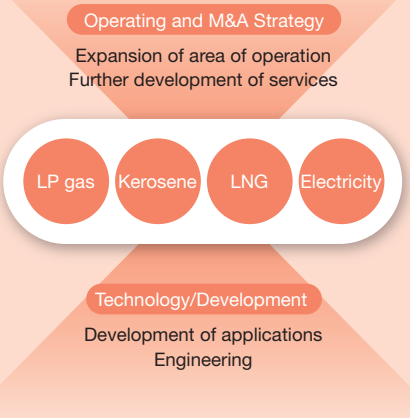
- Less CO_2 in exhaust gas
- Less sulfur and nitrogen
- Less soot and ash

Business Overview and Features

Air Water has been supplying LP gas and kerosene as energy for daily life to general households, commercial facilities, hospitals, and other public facilities, and also as energy for industrial uses to plants. Air Water is also engaged in the supply of LNG as well as the manufacture and sale of LNG-related equipment, playing an essential role in community life.

<Closely related SDGs>

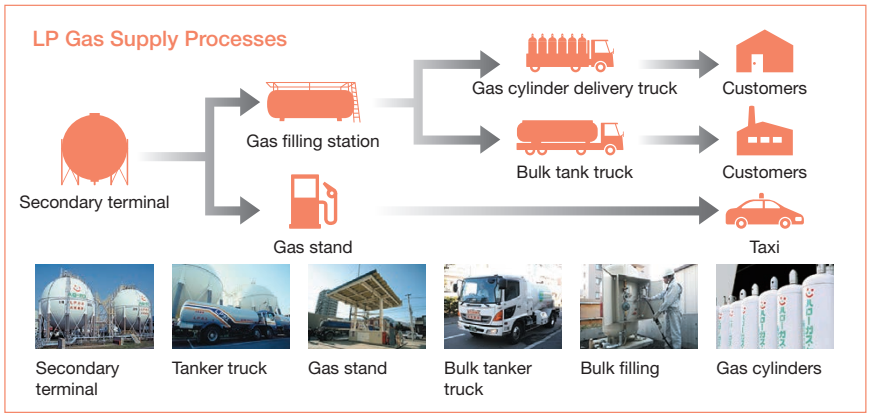
- Stable supply of energy for daily life and industry
- Reduction of environmental load by promoting fuel conversion



LP Gas and Kerosene

LP Gas

In Hokkaido and others, Air Water delivers LP gas under the Hello Gas brand as environmentally friendly, clean energy essential for regional communities and industry.



Kerosene

Usually used as energy for hot water and heating, kerosene is just as important as LP gas, and Air Water delivers a stable supply directly to households.

Energy Equipment

Besides energy supply-related services, Air Water works to provide total support services from diverse perspectives by staying close to customers and remaining deeply rooted in community life.

Mobile Power Source Cars

Mobile power supply vehicles generate electricity using easily procured LP gas as fuel, thereby playing an important role as emergency power providers during a disaster or power failure.

LNG

LNG-related equipment

Utilizing ultra low-temperature technology and unique know-how it has built up over many years, Air Water manufactures and sells LNG tanker trucks and transportation containers, for which it holds one of the top shares in Japan.

LNG Satellite Supply

Air Water designs and installs unloading facilities for LNG transported to areas of demand by tanker trucks, etc. according to customers' usage requirements.

Electricity

エア・ウォーターでんき
powered by ほくでん

Electricity Retailing

Hokkaido Air Water, a regional business company of Air Water, collaborates with Hokkaido Electric Power Co., Inc. to sell electricity generated by Hokkaido Electric Power under the label "Air Water Electricity Powered by Hokuden."

Agriculture and Food Products Business

Summary of FY2017

In the Agriculture business, although prices of agricultural products wildly fluctuated due to unstable weather, the impact of the price fluctuations was offset by efforts to improve the efficiency of vegetable processing and increase productivity in the processed agricultural products area, as well as by brisk sales of agricultural machinery and maintenance services.

In Food Solutions, the Sweets business was severely affected by a rise in production costs and other factors. However, thanks to an increase in sales of raw ham, the core product of the Ham and Sausage subsegment, and the acceleration of cost reduction initiatives such as integrating procurement of raw materials and optimization of logistics, the Food Solutions business as a whole maintained roughly the same level of performance as for the previous year.

The Beverages business showed steady growth as a whole, with vegetable juices selling well throughout the year as well as strong demand for hot tea and plastic bottled coffee in winter, which is usually the season of weak demand, contributing greatly to the improved performance of the entire Agriculture and Food Products Business.

As a result of these, total sales for the segment were 133.702 billion yen (112.9% of the previous year), with ordinary income of 4.85 billion yen (118.1% of the previous year).

Outlook for FY2018

In order to mitigate the impact of extreme climate change on the Agriculture business, Air Water will promote the distribution of producers of raw materials for agricultural products. It will also put efforts into cost reduction through restructuring of part of the businesses and encouraging joint material purchasing among subsidiaries, as well as capital investment to save labor, with the aim of responding to rises in labor and logistics costs. The Beverages business, in particular, will make effective use of the new juice production line established at Eniwa Plant, which is one of the largest in Hokkaido, while accelerating investment in the enhancement of production lines for high value-added products. The Sweets business will improve production efficiency by taking advantage of the launch of a new plant under construction in Atsugi City, Kanagawa, thereby achieving a recovery in earnings.

Major Measures for FY2018

Food Solutions
- Demonstrating the effects of M&A

Beverages
- Developing high-value products that appeal to brand manufacturers
- Improving profitability of home delivery water business

Agriculture
- Hedging against weather risks by decentralization and distribution of production sites, and securing procurement of ingredient vegetables

TOPICS

Food safety and quality management reinforced with participation of a food safety specialist company

In January 2018, Q&C Co., Ltd., a company specializing in providing support for the introduction of HACCP related to food safety, acquisition of various certificates (ISO, FSSC, JFS, etc.), sanitation management guidance, microorganism testing, etc., joined the Air Water Group. Operating mainly in Hokkaido, Q&C has built up abundant experience and trust over its long years of commitment to guidance and testing operations concerning food safety, as well as a consultant function adaptable to international food safety certification systems.

Amid growing concern over food safety and security in recent years, the revised Food Sanitation Act was adopted in June 2018, followed by the decision to introduce HACCP, a global food sanitation management scheme, in Japan. Food-related business operators are required to take further measures to ensure food safety and security.

Food safety and security is the most important factor for the continuation and development of the Agriculture and Food Products Business. The joining of a food safety specialist company to the Group has enabled the Air Water Group to deliver products and services with higher consciousness around food safety and security at all stages of manufacturing, from upstream to downstream.

Microorganism testing by official method

Swab sampling for testing microorganisms on cooking utensils

Business Overview and Features

The Agriculture and Food Products Business started with sales of frozen foods utilizing liquid nitrogen. Through the integration into the Air Water Group of functions ranging from vegetable production to the distribution of food and beverage products across Japan, the Agriculture and Food Products Business is creating a new value chain that maximizes Group synergies.

<Closely related SDGs>

- Improving stability and productivity of agriculture
- Stable supply of safe and secure food products
- Reduction of waste and loss

Responsible for all agricultural produce operations, from production to procurement, processing, distribution, and retail.

Sells high-quality OEM products and a full lineup of own-brand products.

Food Solutions

Ham and Sausage

Under the three brands “Shunsetsu,” “Sagami Ham,” and “Daisen Ham,” Air Water offers customers throughout Japan high-end ham and sausage products, with a particular focus on raw ham, for which Air Water holds one of the biggest shares in the country.

Processed Agricultural Products

Air Water manufactures high-quality frozen vegetables such as broccoli, sweetcorn, and pumpkin as well as flavorsome cooking sauces, and satisfies the needs of professional chefs and the food service industry by proposing new applications and menus.

Sweets

Taking advantage of its strength in product development, Air Water offers a wide range of sweets, mainly chilled desserts, for both general consumers and businesses. In September 2018, a state-of-the-art plant was completed in Atsugi City, Kanagawa Prefecture.

Agriculture

Cultivation

Air Water is involved in the production of tomatoes and other vegetables at the Chitose Farm in Hokkaido, which has one of Japan’s largest greenhouses, and the Azumino Farm in Shinshu.

Agricultural Machines and Tools

Air Water manufactures and sells agricultural machinery that supports Hokkaido’s industry, such as beet harvesters and cultivators.

Procurement and Processing

Leveraging procurement channels encompassing over 700 contract farmers in Japan, Air Water offers various processed agricultural products, such as frozen pumpkin made in Hokkaido and grated radish for commercial use, throughout the country.

Distribution and Sale

Air Water offers safe, secure, tasty, and fresh vegetables and fruit at Takatani Shoten, an intermediate wholesaler of the Otsu Market and Kyushuya, the operator of a large chain of fruit and vegetable specialty stores in Japan.

Beverages

Vegetable and Fruit Juices

Air Water sells vegetable juices, of which it has the largest OEM production share in Japan, as well as other high-quality beverages, both on an OEM basis and under its own brands.

Home Delivery Water

Air Water delivers snowmelt water from the Northern Alps to the homes of its customers by employing the non-heating method to maintain the original natural taste of the water.

Logistics Business

Summary of FY2017

In the 3PL business, which is centered on food logistics, delivery service for major convenience store chains significantly expanded in terms of both quantity and area, thanks to new distribution centers opened in line with an increase in the volume of delivery and orders received in new areas. The Transport business, which covers general cargo transportation, enhanced regional operations and trunk line transportation by making active capital investments, including setting up two new centers in the Honshu area.

Meanwhile, the business environment remained very challenging due to the impact of an increase in delivery cost due to truck driver shortage, as well as soaring labor costs and diesel oil price.

The Vehicle Bodies business, which undertakes the design and mounting of various truck bodies, showed steady performance with an increase in sales volume of trucks and trailers, thanks to the success of continuous capital investments.

As a result of these, total sales for the segment were 44.933 billion yen (105.9% of the previous year), with ordinary income of 1.888 billion yen (83.5% of the previous year).

Outlook for FY2018

In the Logistics Business, Air Water will implement various measures for the improvement of business operations and the optimization of transportation fares for customers, with the aim of tackling various challenges, including the shortage of drivers and the associated rise in transportation costs, as well as the rise in the cost of labor related to warehouse operations. At the same time, Air Water will promote the integration of logistics within the Group and further deepen ties through logistics, while accelerating initiatives, including capital investment, to expand the logistics business focusing on the field of low-temperature logistics, a market expected to grow further.

Major Measures for FY2018

- Promoting integration of the Group's logistics operations
  (Focusing on the Agriculture & Food Products Business and the Life & Energy Business)
- Determining appropriate sites and promoting infrastructure development
  (Further strengthening and expanding own logistics networks)
- Creating region-unique businesses in collaboration with regional business companies
  (Focusing on the Hokkaido area)
- Viewing the low-temperature logistics as a growth market, promoting development of low-temperature equipment
  (Enhancing related infrastructure development)

TOPICS

Expanding food logistics business through the establishment of a low-temperature logistics network

In September 2018, the Air Water Atsugi Low-temperature Logistics Center to be operated by East Japan Air Water Logistics Co., Ltd., an Air Water Group company, was completed on a site owned by the Group in Atsugi City, Kanagawa Prefecture.

Based on the belief that logistics will play a key role in the growth of its business in the future, Air Water designates the integration of logistics of the Group as the highest priority task at present for the stability and growth of business, and is working on the review of the logistics systems of all business domains of the Air Water Group. The initiative particularly focuses on the Agriculture and Food Products Business, one of the Air Water Group's growth fields, and the Atsugi Low-temperature Logistics Center was built as a hub for the Group's food logistics targeting large consumption areas. The Center, to be used in combination with the main plant of Plecia Co., Ltd., a sweets business operator, will enable integrated operations from manufacturing to inventory management and delivery, thereby improving the efficiency and quality of logistics.

In line with the integration of the Group's logistics, Air Water views it as crucial for its future business growth to strategically set up its own logistics centers and establish logistics infrastructure that is closely tied to local communities. Food logistics, which requires meticulous temperature control to maintain the quality and freshness of food, is particularly expected to grow further, and Air Water has a big advantage in this field thanks to its constant low-temperature transport technology developed in the transportation of high-pressure gases. With the launch of the Atsugi Low-temperature Logistics Center, a low-temperature logistics network now connects the Hokkaido and Tohoku areas with the Tokyo metropolitan area, a large consumption area. Air Water will further expand the food logistics business, with a view to the possibility of joint logistics operation within the food industry.

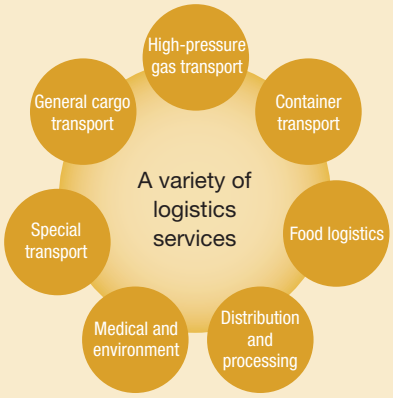
Atsugi Low-temperature Logistics Center

Business Overview and Features

The Logistics Business started with the transportation of high-pressure gases, such as industrial and medical gases. Today, the business has expanded into a variety of fields, including food logistics (mainly 3PL), medical logistics for the transportation of blood, general cargo transport, container transport, and even design and mounting of truck bodies, etc.

<Closely related SDGs>

- Stable supply of industrial and medical gases
- Providing high value-added logistics services
- Efforts to improve logistics efficiency



Logistics

High-pressure Gas Transport

Air Water delivers high-pressure gases such as oxygen, nitrogen, and argon by the optimum transport means, ranging from liquefied gas tank trucks to trailers, in a safe and speedy manner. The transport know-how and constant low-temperature technology, which have been developed for high-pressure gas transport, have provided the basis for various logistics services that Air Water offers today.

Transport

Utilizing the transportation network centered on Hokkaido that connects the sites around Japan, Air Water transports all types of cargo, from construction materials and general cargo such as livestock feed and fertilizers to food and beverages, in different temperature zones, from room temperature to chilled to frozen. The Transport business is also available for container transport using ferries between Hokkaido and Honshu.

3PL

Mainly in the food logistics field, Air Water aims to provide efficient and high added-value logistics services by comprehensively taking care of the entire logistics operations of shippers, business restructuring, and management.

Medical and Environment

Taking advantage of its advanced constant low-temperature technology developed through transportation of high-pressure gases, Air Water conducts all types of transportation related to blood collected at blood centers around the country, including transportation of raw blood plasma, blood samples, raw blood, and blood for transfusion.

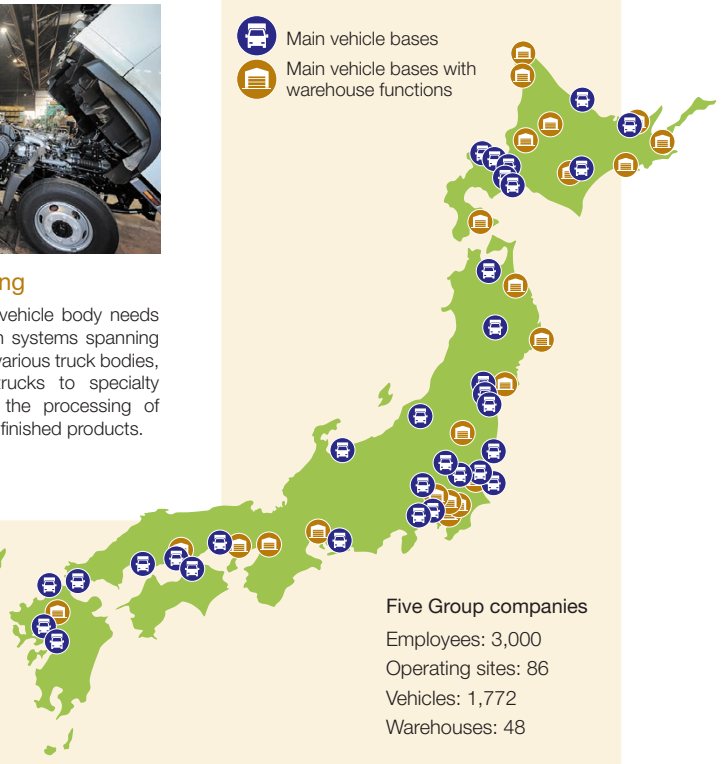
Vehicle Bodies Mounting

Air Water meets customers' vehicle body needs through integrated production systems spanning the design and production of various truck bodies, truck trailers, and tanker trucks to specialty vehicles, and ranging from the processing of materials to the production of finished products.

The Group's Nationwide Distribution Network

(As of March 31, 2018)

Mainly in the Hokkaido, Tohoku, and Kita Kanto regions, Air Water maintains a cold chain for convenience stores and supermarkets. It is also involved in the production of specialty vehicles. The Group also leverages its temperature control technology to provide logistics services for the transportation of raw blood plasma.



Five Group companies

Employees: 3,000
Operating sites: 86
Vehicles: 1,772
Warehouses: 48

Seawater Business

Carrying on the long tradition of salt production, Air Water contributes to the stable supply of salt and offers food and environmental products derived from seawater. Air Water also applies its know-how accumulated in production processes to water treatment and other technologies.

<Closely related SDGs>

- Offering water treatment services
- Offering environmental products

Salt

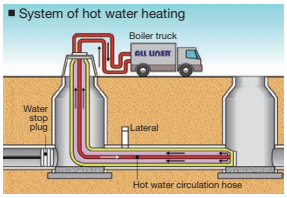
Salt

Nihonkaisui Co., Ltd., the leading producer of salt in Japan, provides a stable supply of high-quality salt products to regions throughout Japan from its Ako and Sanuki plants.

Environment

Water and Soil Treatment Agent

Air Water is utilizing seawater resources and technologies to expand a wide range of its business areas, particularly environmental products such as absorbent for water and soil treatment and magnesium hydroxide.



All Liner Method

Forming a resin liner pipe inside a sewer pipe to cure problems inside the pipe without digging up the ground

Regeneration of Sewer Pipes

Aquaintec Corporation employs the "All Liner" method, an innovative technology to regenerate aged underground pipes without digging up the ground, thereby contributing to safe and comfortable communities.

Electricity

Woody Biomass Power Generation

In 2015, Ako Plant of Nihonkaisui Co., Ltd. introduced an integrated cogeneration power system that uses woody biomass and natural gas. The generated electricity is used for its own purposes and also sold.

Agriculture

Agricultural Fertilizers

Nihonkaisui Co., Ltd. utilizes seawater resources to supply potassium chloride, one of the three major fertilizers, for fertilizer manufacturers. The company is exploring applications of seawater resources other than fertilizers with the aim of further expanding its business.

Food Products

Seawater-derived Food Products

Air Water has commercialized bittern generated in salt production processes as a food additive. The company also offers products from seaweed grown in the Ariake Sea, Kyushu, as well as Italian food ingredients and seawater-derived mineral water.

Magnesia

Magnesia for Oriented Electromagnetic Steel Sheets

Oriented electromagnetic steel sheets, used as the iron core of a transformer, etc., are indispensable for electric devices. And magnesia is a raw material indispensable for the manufacturing of electromagnetic steel sheets.

Magnesia for Insulating Materials

Mainly used as insulating filler for sheathed heaters, which are used as heating elements in a broad range of equipment, from home appliances such as electric rice cookers, irons, and hot plates to various types of industrial heating equipment.

High-purity Magnesia for Fire-resistant Materials

For magnesia-carbon brick, which is used for the lining of converters at steelworks. Used especially for magnesia-carbon brick for parts exposed to extremely harsh furnace conditions.

Aerosol Business

The Aerosol business provides various aerosol products and liquid-filled products that have today become indispensable in our daily life and business activities. By making use of its advanced gas technologies, it offers products ranging from quasi-pharmaceutical products, cosmetics, and household commodities to industrial items.

<Closely related SDGs>

◆ Reduction of environmental load by using alternative CFC

Business Overview

Air Water conducts a broad range of businesses on an OEM/ODM basis, flexibly responding to diverse needs of customers by manufacturing aerosol products and other liquid-filled products in both large and small lots, from items for the human body and household commodities to paint, automotive parts, and industrial items. In November 2018, a new plant for liquid-filled products was completed in Omitama City, Ibaraki Prefecture, with which Air Water will enhance its capacity for liquid-filled products and product lineups, while also working to further expand business in the cosmetics field.

Production Sites

Four plants in Japan manufacture aerosol products and liquid-filled products. Gifu Plant excels in the manufacture of paint while Gunma Plant has strengths in cosmetics and items for the human body. Ibaraki Plant is capable of manufacturing all types of products, including pharmaceutical and quasi-pharmaceutical products, industrial items, and other miscellaneous goods, while Sanyo Plant produces liquid-filled products for gardening. Thus the four plants have different characteristics.

<Business sites>

Research and Development

With the aim of satisfying customers, Air Water's research and development is focused on launching onto the market safe and environment-friendly aerosol products developed from unique ideas. Based on the pursuit of quickly responding to customer demand by utilizing data in the broad fields in which Air Water has experience in formulation development, we conduct marketing for upcoming demands and needs, and offer new solutions.

<Major Products>

Items for Human Body

Hair spray, hair dye, hair care spray, hair mousse, hair growth tonic, natural water/lotion spray, shaving foam, UV cut spray, asthma drug, anti-inflammatory analgesic, etc.

Household Commodities

Pesticide, glass cleaner, room deodorant, shoe deodorant, waterproof agent, antistatic agent for clothes, disinfectant spray, portable fire extinguisher, cooking spray, pet items, gas cylinders for portable cookers, dust blower, etc.

Paint

Repair paint for automobiles, household paint, construction paint, etc.

Automotive and Industrial Items

Defogger, glass polisher for cars, tire/leather protectant, carburetor cleaner, brake cleaner, car air conditioner deodorant, anticorrosive lubricator, metal flaw detector, mold release agent, adhesive, etc.

Other Businesses

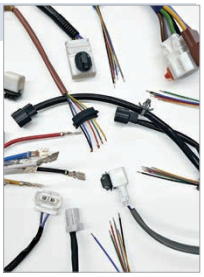
With unique technologies and distinct products such as O-rings, ECOROCA®, and NV (metal surface treatment), these businesses underpin the concept of the Order Rodentia Style of Business, supporting the growth of the Air Water Group.

<Closely related SDGs>

- Providing construction materials using waste materials and waste wood (ECOROCA®)
- Biomass power generation by effectively using thinned wood and PKS (palm kernel shell)

Electronics Materials

Leveraging its global network, Air Water offers a wide range of chemical products for various industries, from basic chemicals to high-purity chemicals, electric insulating materials and resin molded items for the electronics field. Air Water also jointly develops materials for customer products with manufacturers and provides state-of-the-art information and materials.



O-rings

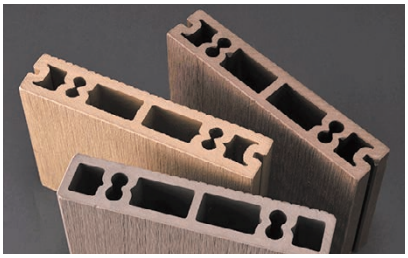
Air Water manufactures and sells various types of seal materials such as rubber O-rings and other rubber products for industrial use. For semiconductor manufacturing systems, it offers a lineup under the Pororoca brand of ultra high-performance rubber O-rings. Recently, it has developed and marketed O-rings made of perfluoroelastomer (FFKM), which have the world's highest level of heat resistance, and O-rings made from general-purpose fluoroelastomer rubber (FKM).

BELLPEARL

Air Water offers "Bellpearl" high-function particulate phenolic resin, "Bellfine" functional new carbon made by the highly controlled burning and carbonizing of Bellpearl resin, and "Bellswing," a PSA-type nitrogen gas generator that uses Bellfine carbon as an absorbent.

ECOROCA®

Air Water manufactures and sells ECOROCA®, a new compound recycled material made from underutilized resources such as waste wood and waste plastic. Delivering excellent strength and safety while maintaining the texture of wood, ECOROCA® is used as decking material, louver material, and wall material at various sites, mainly public facilities.



NV (Metal Surface Treatment)

Air Water provides unique metal surface solutions such as NV nitriding, which provides a high-performance nitrided layer on metal surfaces with strong nitriding power and control technology, and Pionite, which increases the hardness of stainless steel without compromising corrosion resistance.

Electricity

Air Water's Industrial Gas Business consumes a vast amount of electricity in its manufacturing processes. In order to continue stable business operation under any and all circumstances, including a large-scale disaster, Air Water believes it crucial to secure baseload power to be able to procure electric power by itself, in principle. Under this belief, Air Water is promoting power generation using renewable energy sources.

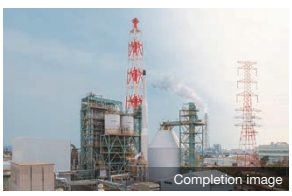
Air Water & Energia Power Yamaguchi (Hofu City, Yamaguchi)

Woody biomass and coal co-fired power generation
Generation capacity: approx. 112,000 kW
(Start of operation scheduled for July 2019)

Air Water & Energia Power Onahama (Iwaki City, Fukushima)

Woody biomass mono-fired power generation
Generation capacity: approx. 75,000 kW
(Start of operation scheduled for April 2021)

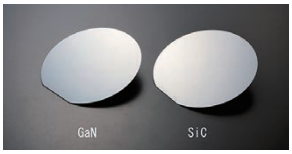
Nihonkaisui Ako No. 2 Biomass Power Plant (Ako City, Hyogo)



Woody biomass mono-fired power generation
Generation capacity: approx. 30,000 kW
(Start of operation scheduled for first half of 2020)

SiC

Air Water has developed its own SiC substrate for products such as power semiconductors and super luminosity LEDs, and has begun supplying substrates to domestic and international customers. Air Water successfully established a technology for large-diameter substrates of up to eight inches and mass-produced the substrates, which are deemed the most suitable for the growth of GaN (gallium nitride).



Overseas Businesses

Air Water sees the expansion of businesses overseas as a powerful driver for its growth in 2020 and beyond.

<Overseas Group Companies>

<China>	1 Yingkou	Ying Kou Abe Harness Co., Ltd.
	2 Dalian	Tateho Chemical Dalian Co., Ltd.
		Air Water Mach (Dalian) Co., Ltd.
	3 Lianyungang	Air Water Richap (Jiangsu) Chemical Co., Ltd.
	4 Shanghai	Shanghai Dongpeng Safety Co., Ltd.
		Air Water Sol (Shanghai) Trading Co., Ltd.
		Shanghai Air Water International Trading Co., Ltd.
		Shanghai Air Water Medical Gas Co., Ltd.
		EPOCH TECHNOLOGY CO., LTD.
		Air Water NV (Shanghai) Co., Ltd.
	5 Suzhou	Daio Trading (Suzhou) Co., Ltd.
	6 Fujian	Air Water Mach Rubber Products (Fujian) Co., Ltd.
	7 Zhejiang	Zhejiang Kawamoto Health Care Products Co., Ltd.
	8 Xiamen	Air Water Special Gas Co., Ltd.
<Taiwan>	9 Taipei	INOTEC TAIWAN CO., LTD.
	10 Xinzhu	Taiwan Air Water Mach Tech. Co., Ltd.
<Philippines>	11 Manila	TEPPEN INTERNATIONAL INC.
	12 Laguna	INOUEKI PHILIPPINES, INC.
		GOLD KOGYO LAGUNA PHILIPPINES INC.
		AIR WATER PHILIPPINES, INC.
<Vietnam>	13 Ho Chi Minh City	AIR WATER VIETNAM CO., LTD.
	14 Hanoi	AIR WATER VIETNAM CO., LTD.
<Thailand>	15 Bangkok	INOUEKI (THAILAND) CO., LTD.
	16 Chonburi	AIR WATER (THAILAND) CO., LTD.
<Malaysia>	17 Kuala Lumpur	TAYLOR-WHARTON MALAYSIA SON. BHD.
		INOUEKI (MALAYSIA) SND.BHD.
<Singapore>	18 Singapore	INOUEKI SINGAPORE PTE. LTD.
		GLOBALWIDE INTERNATIONAL PTE. LTD.
		GLOBALWIDE M&E PTE. LTD.
		POWER PARTNERS PTE. LTD.
<Indonesia>	19 Jakarta	PT.INDONESIA AIR WATER
<India>	20 Kolkata	ELLENBARRIE INDUSTRIAL GASES LIMITED.
	21 Gurgaon	AIR WATER INDIA PRIVATE LIMITED
<United States>	22 Webb City (Missouri)	TATEHO OZARK TECHNICAL CERAMICS, INC.
	23 Torrance (California)	KDF U.S., INC.
	24 New Jersey	AIR WATER AMCS,LLC.
		AIR WATER AMERICA INC.
	25 Georgia	TOMCO2 SYSTEMS COMPANY
	26 Massachusetts	PRECISION FABRICATORS LTD.
<Canada>	27 Vancouver	Hitachi High-Tech AW CRYO, INC.

North America

With a view to the launch of gas supply business in the United States, Air Water is building up engineering foundations. Air Water acquired TOMCO$_2$ Systems, a manufacturer of carbon dioxide equipment, in February 2018, as its first base in the United States for equipment manufacturing and sales. Through accelerating other M&A deals and collaborations with local partners, the Group will expand businesses in the fields of industrial gas equipment and plant engineering.

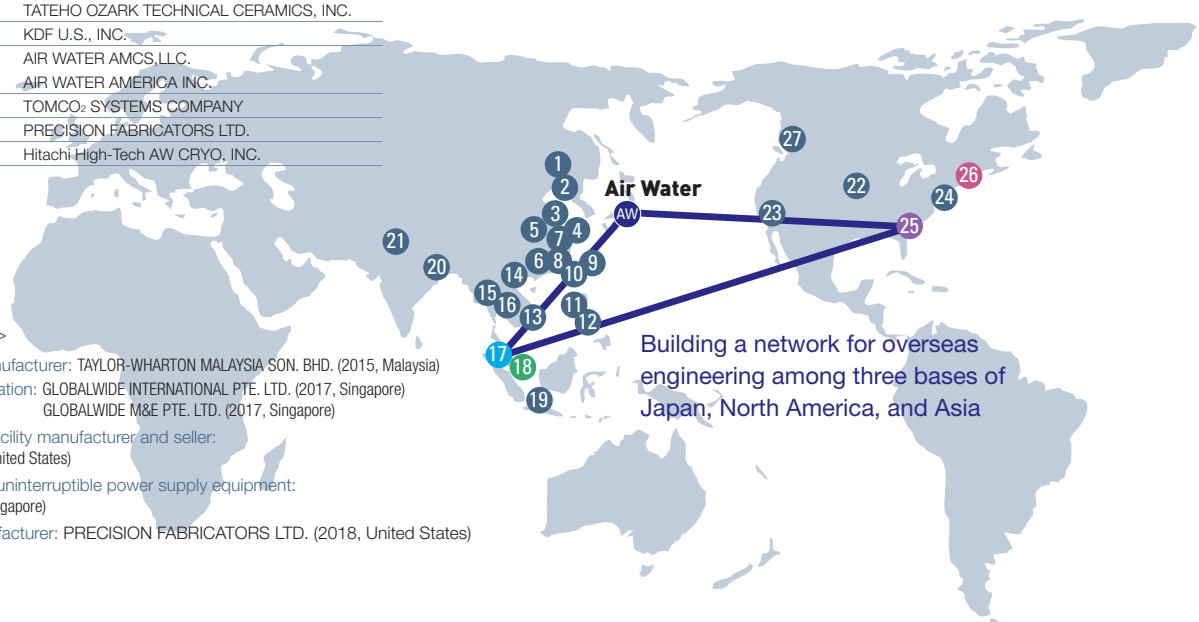
Asia

Air Water conducts industrial gas businesses in areas where market growth is expected, such as India, Vietnam, and Indonesia, through ties with existing Group companies and major local firms. In August 2018, Air Water acquired Power Partners Pte. Ltd., a Singapore-based company engaged in engineering and maintenance of uninterruptible power supply equipment, as its Group company, to enhance its engineering bases in Asia.

In the Medical Business segment, GLOBALWIDE, a Singapore-based hospital interior and facility installation company acquired by M&A in June 2017, will take the initiative in developing businesses of the Air Water Group in the fields of medical equipment and hospital facility installation in Southeast Asia.

Outlook

The Air Water Group will move the focus of its overseas businesses from expansion within the Group companies to active business partnerships and M&A with local partners, mainly in the engineering segment of the Industrial Gas Business and the medical equipment and hospital facility installation segments of the Medial Business, as well as promoting related products and technologies overseas.



Building a network for overseas engineering among three bases of Japan, North America, and Asia

<Recent M&A Deals Overseas>

- 17 Low-temperature equipment manufacturer: TAYLOR-WHARTON MALAYSIA SON. BHD. (2015, Malaysia)
- 18 Hospital interior and facility installation: GLOBALWIDE INTERNATIONAL PTE. LTD. (2017, Singapore)
  GLOBALWIDE M&E PTE. LTD. (2017, Singapore)
- 25 Carbon dioxide equipment and facility manufacturer and seller: TOMCO$_2$ SYSTEMS COMPANY (2018, United States)
- 18 Engineering and maintenance of uninterruptible power supply equipment: POWER PARTNERS PTE. LTD. (2018, Singapore)
- 26 Special chemical container manufacturer: PRECISION FABRICATORS LTD. (2018, United States)

Research and Development

As a company that makes use of the Air Water promotes diverse research to the development of society across

Air Water's research and development is aimed at constantly sophisticating the core technologies developed in the industrial gas businesses and applying them to various other fields, such as medical and agriculture, while actively introducing new technologies under the open innovation initiative. Thus the continuous growth and robust development of technologies support the Group's All-Weather Management System.

Air Water's unique "Order Rodentia Style of Business" growth strategy also supports technology development of the entire Group, encouraging further advancement of the Group's high value-added technologies while also incorporating advanced technologies to create the technologies that will drive the further growth of the Group.

R&D activities are conducted through close collaborations with relevant business divisions in each business field on themes set in view of future business needs. Such activities have generated various achievements that are useful to society.

Development across themes

Flexible organization where a research team is formed for each development theme

Research and Development Institute

Development in response to local needs

Gas processing technologies

World's first argon production type Small gas plant

- "VSUA" high-efficiency argon collecting-type liquefied gas plant

The "VSUA," a special type of plant in the VSU Series, is a high-efficiency small liquefied gas plant with the capacity to produce argon, making it the first of its kind in the world. Argon, which constitutes only around 0.93% of air, is generally produced along with a large quantity of oxygen and nitrogen at a large plant. However, Air Water succeeded in the development of a purification technology that enables the low-cost production of argon at a small plant with the world's highest level of argon collecting rate. With this technology attached to the original VSU, a small plant capable of producing liquefied argon has been developed.

VSUA, a high-efficiency compact liquefied oxygen/nitrogen production plant that also produces argon

Low-temperature equipment technologies

Achieving innovatively long life Applicable also to LNG

- Vertical gas-liquid two-chamber structure "VCP Series" centrifugal liquefied gas pumps

"VCP Series" new centrifugal pumps are liquefied gas pumps that have an innovatively long life and are also leak-free, small and lightweight, and low-noise. The unique "vertical gas-liquid two-chamber structure" adopted for these new pumps, which have the motor and pump in separate chambers, has extended the pumps' maintenance cycle to around 20 to 80 times that of conventional pumps, thus making them applicable to plant processes that operate 24 hours a day. Also, because of their leak-free property, the VCP Series pumps are also applicable to the flammable LNG (liquefied natural gas) field.

"VCP Series" centrifugal liquefied gas pumps

Gas application technologies

Solving customers' problems with new technologies enabling special surface treatment

- Atmospheric pressure plasma surface modification and cleaning equipment

Air Water has established technology that realizes the stable generation of plasmas under an atmospheric pressure, as opposed to the vacuum process that is essential for conventional plasma generation. This technology is being used in applications such as surface modification of films and resins, cleaning of liquid crystal glass, silicon wafers, and electronic components, and hydrophilic and water-repelling treatment of substrates. In recent years, moreover, tube-type plasma equipment, which enables the treatment of surfaces in special forms by using tube-like electrodes, has joined the lineup. It is used for hydrophilic treatment that prevents tubes for intravenous drips from catching bubbles on their internal surface, and other applications.

Remote-type atmospheric pressure plasma surface equipment with carrier

earth's natural resources to create businesses, and development that will contribute professional boundaries.

Broad Range of Technologies and Synergy Effects

Air Water has developed unique technologies in diverse business sectors, ranging from industrial gas technology related to all kinds of manufacturing to technology related to electronic materials, fine chemicals, energy, healthcare, cultivation techniques, and food products. Leveraging its advanced technologies in these businesses, Air Water works day in, day out on research activities aimed at creating new technologies unique to Air Water through synergistic effects produced by fusing technologies across business segments.

Research and Development Domains

- Gas processing technologies
- Low-temperature equipment technologies
- Functional resin and carbon materials technologies
- Medical technologies
- New materials technologies
- Agriculture and food products technologies
- Gas collection/recycling technologies
- Plasma surface treatment technologies
- Fine chemical technologies
- Metal surface treatment technologies
- Numerical analysis technologies
- Gas application technologies
- Electronic materials technologies
- Welding technologies
- Energy solution technologies

Research and Development Structure

Research and Development Institute

The research and development structure of Air Water R&D Co., Ltd. is basically composed of groups formed by technological domain, with the aim of becoming able to flexibly respond to the increasingly diverse R&D needs arising in connection with the recent expansion of business domains. If necessary for the R&D theme, however, projects or teams may be formed, to which researchers are assigned flexibly, so that research activities can be conducted in an effective framework suited to each theme.

Process Development Group	Industrial gas technology, including cryogenic air separation units and PSA
Equipment Development Group	Industrial equipment, including the V-AQUAGAS fuel gas generator for welding and LNG pumps
Gas Applications Group	Gas applications including atmospheric pressure plasma surface treatment technology and dry ice snow precision cleaning equipment
Numerical Analysis Group	Simulator-based design and development necessary for development processes of all R&D operations

Infrastructure Development Project

New Business Creation Project

- Development project across themes
- Development project in response to local needs

Sakai Institute

Matsumoto Institute

Welding technologies

Achieving cost rationalization and productivity improvement of welding processes

- V-AQUAGAS fuel gas generator for welding

Aquagas is Air Water's original fuel gas for welding. It is made by mixing hydrogen and oxygen obtained in the process of the electrolysis of water with LP gas or other hydrocarbon gas. Hydrogen, the main element of Aquagas, burns at a very fast rate and its energy density is highly concentrated, which enables faster cutting than conventional LP gas cutting. Moreover, Aquagas generates little heat during burning, resulting in improved product quality. V-AQUAGAS is the fuel generator for welding, which produces Aquagas. It adopts an on-demand generation method and therefore the handling procedure can be simplified, thereby achieving the reduction of both costs and energy consumption.

V-AQUAGAS

Medical technologies

Nursing care bath system helping patients to bathe independently

- Viami Series "Shower All™"

For individuals who are able to seat themselves but have difficulties getting in and out of a normal bath tab on their own, Air Water has developed a lineup of bath system products for its Viami Series to assist with independent bathing. These compact shower and bath systems, which can be installed in households or at small-scale nursing care facilities, work by spraying water mist, with careful attention paid to the prevention of falls and drowning. By adding a new lineup to the Viami Series, Air Water will respond to a broader range of needs in bathing support and nursing care.

"Shower All™" bath system for nursing care

Numerical analysis technologies

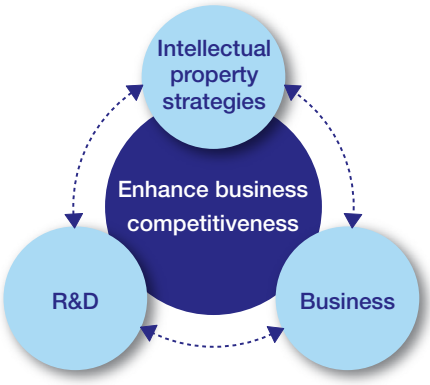
Sharing know-how of Research and Development within the Group

- Product development and design
- Data analysis
- Simulation of natural phenomena

The numerical analysis technologies of institute are based on vibration analysis conducted by Air Water Safety Service Inc., a Group company, in relation to the structural strengths of objects, which is often used for the development of earthquake-resistant fire extinguishing equipment. Conventionally, new fire extinguishing equipment or structures (jig) are developed through trial and error, that is, making a new object and conducting vibration tests on it, and then making a tougher object if it breaks. However, the simulation-based vibration analysis has improved efficiency in various ways. Air Water will continue to accumulate know-how and enhance its technological capabilities, thereby further expanding the scope of products for analysis.

Air Water Safety Service Inc.'s Vibration Test Center

Intellectual Property Strategies Integrated with Research & Development



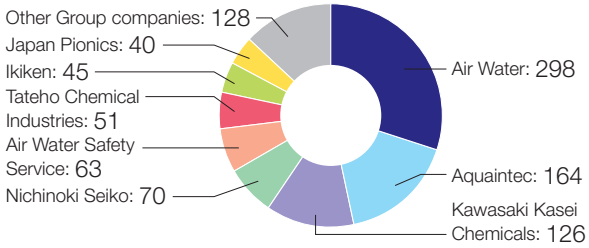
Air Water's intellectual property division leads the intellectual property strategies of all Group companies, and promotes strategic activities in coordination with the R&D division and business divisions under the slogan "Enhance the Air Water Group's business competitiveness through intellectual property activities."

Regarding R&D themes of the research and development division, the intellectual property division conducts in collaboration with the R&D division intellectual property activities appropriate for each of the development stages from "setting a theme and basic testing" to "evaluation test," "verification test," "practical application test," and "commercialization." For each research theme, the most appropriate intellectual property strategy is examined, under which the activities to acquire rights to solidify the R&D and business foundation, including patent application, are promoted. By promoting the integration of R&D and intellectual property activities, Air Water supports the foundations of businesses expected to grow in the future.

Intellectual property activities actively promoted by all Group companies

The Air Water Group includes many companies that are able to create unique technologies by themselves. These companies conduct businesses in a variety of fields, and their development results are formalized as patents or other intellectual property rights. The intellectual property division supports the intellectual property activities of these Group companies while also offering them intellectual property education, thereby promoting the overall improvement of intellectual property abilities and activation of the relevant activities.

■ Number of Patents Owned by Group Companies



(Only for rights effective as of September 2018)

A variety of patents supporting "All-Weather Management System" and "Order Rodentia Style of Business"

The Air Water Group owns patents in various categories, covering all large-classification sections of the International Patent Classification, the world's common patent classification. It is quite unusual for a single corporation to own such diverse technological patents. These patents are supporting Air Water's "All-Weather Management System" management strategy and its "Order Rodentia Style of Business" growth strategy.

Major Products Covered by the Patents

Industrial Gas	Cryogenic separation, absorption separation, gas nitriding, welding gas generator, atmospheric pressure plasma treatment equipment, exhaust gas purification method
Chemical	Electronics materials (phenolic resin, epoxy resin), carbon materials (thermally expandable graphite), pharmaceutical and agricultural intermediates, photo-polymerized composition
Medical	Home oxygen concentrator, artificial respirator, operating room facilities, artificial tooth composition, sanitary materials
Energy	Vertical LNG pump, LNG tanker truck, hybrid water supply and heating equipment, mobile LP gas power supply vehicle, LNG satellite equipment
Agriculture and Food	Crop harvester, crop cleaning equipment, water server
Other	SiC substrate materials, water treatment facilities, magnesia materials, artificial or recycled wood materials, aerosol

Intellectual property activities in line with global strategies

In accelerating the recent expansion of overseas businesses, Air Water minimizes risks in relation to intellectual property by acquiring necessary rights and conducting a risk survey in each country before launching businesses.

In the field of intellectual property, laws and systems are often revised in China, South Korea, and Taiwan, as well as in rapidly growing Southeast Asia and India. Air Water promptly responds to such international changes and conducts its intellectual property activities from a global perspective.

TOPICS

Industry-academia collaboration aimed at expediting commercialization of research results

Agreement on Comprehensive Research Collaboration, etc. concluded with Muroran Institute of Technology

In May 2018, the Muroran Institute of Technology and Air Water entered into an industry-academia collaboration agreement aimed at developing technologies, etc. to produce innovations related to agriculture and food in Hokkaido. Under this agreement, the two parties will conduct research on a problem-solving basis utilizing regional resources, with the aim of developing technologies and human resources that will contribute to the revitalization of local communities. For the future, we are planning to promote exchanges of researchers, and to not only achieve academic findings but to put the research results into practical application as soon as possible.

Joint Research Themes

(1) Research and development on the method of quantitative analysis of functional elements and building a database
(2) Research and development on technologies for the production of vegetables for processing
(3) Research and development on AI infrastructure development for protected cultivation

Air Water's Approach to CSR

The origins of our business can be found in its name, which consists of two words: "air" and "water." Our aim is to create businesses by making use of these natural resources and thereby contribute broadly to society and everyday life. This means that our business activities bear significant social responsibilities.

As our Group companies cooperate in conducting diverse businesses to support social development and enriched living, we bear responsibilities toward a broad range of our stakeholders; namely, the "social responsibility of a company" to aim for growth together with its employees, shareholders, investors, suppliers, and other business partners through the sustainable growth of our Group companies, and the "social responsibility of a corporate citizen" to contribute to the global environment and local communities, which is a basic requisite for a company that is demanded and needed by society.

For Air Water, CSR is an integral part of its management in all aspects. Since Air Water's management is inseparable from its CSR, we must further enhance our CSR management to achieve the Group's sustainable growth.

Being constantly aware of its multifaceted corporate social responsibilities, Air Water will enhance its CSR management from the standpoint of its stakeholders, and thereby raise its corporate value.

Enhancement of CSR Management

Environment

Air Water, which is engaged in businesses that utilize natural resources including air and water, believes that activities to preserve the global environment are essential for sustainable corporate growth. As a company making use of the earth's resources for its businesses, we acknowledge that it is our important mission to contribute to the preservation of the global environment for the future by proactively conducting environmental activities and promoting environmental businesses.

- Environmental Management
- Reduction of Environmental Load
- Addressing Global Warming
- Efficient Use of Resources
- Proper Management of Chemical Substances and Air Pollutants
- Promoting Environmental Businesses

Environmental Management

Air Water Group Environmental Basic Policy

(1) We work on prevention of environmental pollution, global warming countermeasures (mitigation of and adaptation to climate change), effective use of resources, and reduction of chemical risk in all our business activities from research and development to production, sales, logistics, and service.
(2) We research and examine the impact on the environment resulting from our business activities, establish technically and economically feasible goals for reducing environmental load, and promote environmental conservation activities. At the same time, we continually try to improve our environmental management system.
(3) We comply with environmental laws and regulations, establish voluntary standards as necessary, and work for environmental conservation.
(4) We select resources (facilities, raw materials, subsidiary materials, components, etc.) required for business activities that satisfy technological and economic demands, but which also have a small environmental impact and little negative effect on local residents and employees.
(5) Our research & development gives consideration to the environment, safety, and quality, and provides products and goods and develops technologies that contribute to the environment.
(6) We promote acquisition of the ISO 14001 international standard for environmental management systems, and arrange structures for implementing our Environmental Basic Policy.
(7) We use internal publicity and other activities to boost the understanding and awareness of all employees regarding the Air Water Group Environmental Basic Policy. We disclose this Environmental Basic Policy to the general public.

Air Water Group's Major Issues Related to the Environment

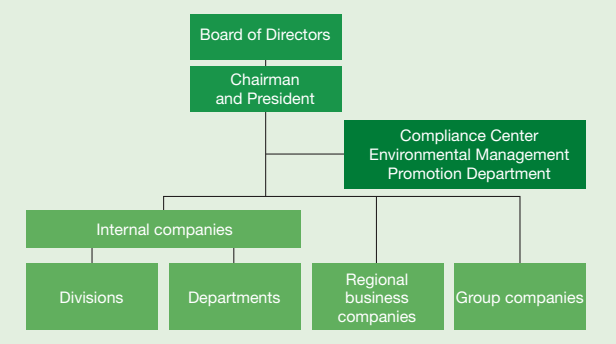
Among issues related to sustainability, the Air Water Group has identified global warming countermeasures, effective use of resources, and reduction of chemical risk as major issues related to the environment and is actively working to address them.

These major issues are indicated in the international standard "ISO 26000:2010 Guidance on social responsibility" as issues that need to be addressed by the organization as a whole, and we regard this process as indispensable to the sustained development of the Air Water Group.

Environmental Management Structure

The Air Water Group's environmental activities are led by the representative director, who serves as chief environmental officer. As a part of these activities, the Group's Environmental Management Promotion Department at the Compliance Center, which provides guidance on compliance with environmental laws and regulations at workplaces and plants and at Group companies, promotes activities to reduce environmental load, and supports activities to obtain and maintain ISO 14001 certification.

■ Air Water Group Environmental Management Structure



Efforts on Environmental Management Systems

The Air Water Group has acquired ISO 14001 environmental management system certification primarily for Group companies with a high environmental load. Certification has now been obtained for 21 organizations.

Environmental Risk Management

Publication of Environmental Information

The Air Water Group publishes Environmental Information to provide information, such as on amendments to environmental laws and regulations and environmental conservation efforts by other companies, to workplaces and Group companies.

In fiscal 2017, six issues were published with information on deadlines for disposal of high-concentration PCB waste, proper treatment of mercury waste, and other key topics.

Sharing information throughout the Group helps reduce environmental risk.


環境情報

期限が迫る高濃度PCB廃棄物処理

Environmental Information

Environmental Audits

Air Water conducts environmental audits to guide environmental preservation activities and compliance with environmental laws and regulations at each plant of the Group. Audits are conducted according to set schedules and based on the degree of environmental load at each manufacturing plant, whether ISO 14001 certification has been acquired, the findings of past environmental audits, and other factors.

In fiscal 2017, environmental audits were conducted at 31 business establishments.

Environmental audit

Development of Personnel to Lead Environmental Activities

Environmental Laws Workshop

Each year Air Water holds training workshops to develop personnel who will play the central role in environmental activities at Group companies.

In fiscal 2017, to raise understanding within the Air Water Group about environmental laws and minimize the risk of violation of the laws, training workshops were held mainly for beginners in environmental management and young or middle-level employees. Lecturers invited from outside the Group explained the latest developments regarding major environmental laws applicable to the Air Water Group. The workshops were held in the three locations of Osaka, Tokyo, and Sapporo, with the participation of 89 employees.

Environmental Laws Workshop

ISO 14001 Internal Auditor Development Seminar

Air Water conducts training seminars every year to develop internal auditors for organizations and Group companies that have acquired ISO 14001 certification.

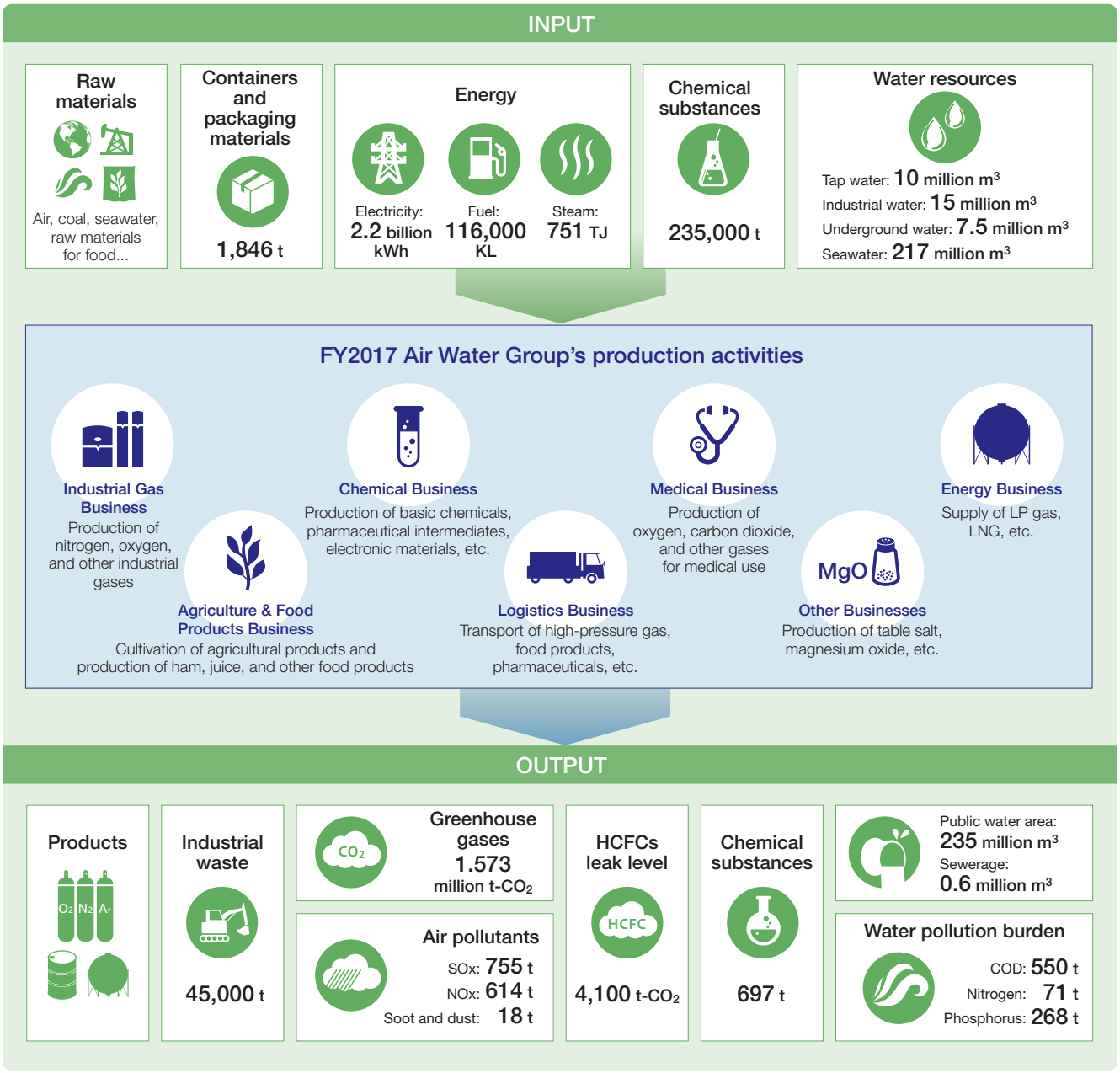
In fiscal 2017, the ISO 14001 internal auditor development seminar based on the 2015 revision of ISO 14001 was held in Osaka, Tokyo, and Sapporo, in which 82 members of the Air Water plants and Group companies in charge participated. The participants learned the points and aim of the 2015 revision and key points in internal auditing. They also deepened their understanding through internal audit exercises and examinations.

ISO 14001 Internal Auditor Development Seminar

Overall Picture of the Environmental Load (Material Balance)

Providing customers with products created from the earth's natural resources such as air and water, and returning them to nature after they have been used.

The Air Water Group's work is intimately related to the earth. We therefore promote reductions of our environmental load by tracking inputs like resources and energy and outputs like products and waste at our major manufacturing facilities.



<Material Balance> 68 domestic plants of 28 companies below

Scope of collection of environmental performance data

Air Water Inc. and 27 consolidated subsidiaries* (28 companies in total)

* Consolidated subsidiaries selected as having a high environmental load under the Air Water criteria (CO_2 emission coverage: 90% or above)

<27 Group companies>

- Industrial Gas: 7 companies
- Chemical: 2 companies
- Medical: 2 companies
- Agriculture and Food Products: 7 companies
- Logistics: 1 company
- Other: 5 companies
- Regional business companies: 3 companies

Addressing Global Warming

Basic Approach to Addressing Global Warming

The Air Water Group uses a great deal of energy for its business activities. In particular, the Industrial Gas Business, one of the Group's major businesses, requires a huge amount of electricity for the processes used in producing gases, such as oxygen, nitrogen, and argon.

The Group is therefore working to conserve energy and reduce greenhouse gas emissions by tracking energy use in all its operations, including not only at plants but also at offices and research facilities. Air Water is also enhancing its entry into the electric power business by establishing power plants for renewable energy, contributing to the reduction of greenhouse gas emissions.

Electric Power Business Using Renewable Energy Sources

Air Water conducts electric power business. All of its power plants that are in operation or under construction use woody biomass, which is a renewable energy source. Woody biomass power generation is carbon-neutral. By replacing fossil fuel-based electric power with woody biomass power, Air Water contributes to the reduction of greenhouse gas emissions.

Nihonkaisui Co., Ltd., a Group company, set up a power plant that uses biomass and natural gas at its Ako Plant in 2015. The electricity and steam generated by the plant are used internally and also sold to outside parties. The company is now constructing the Ako No. 2 Biomass Power Plant, which is scheduled to start operation in the first half of fiscal 2020 (details on p. 46).

The Air Water Group is also constructing a woody biomass and coal co-fired power plant in Hofu City, Yamaguchi, which is scheduled to start operation in July 2019. In Iwaki City, Fukushima, the Group is also planning construction of a woody biomass mono-fuel power plant of the largest scale in Japan, with a view to starting operation in April 2021.

Total output of the Air Water Group's power plants using renewable energy sources, both existing and planned, is approximately 240,000 kW. This is equal to about a quarter of the output of a nuclear power plant with a capacity of 1 million kW. And it also reduces approx. 800,000 t-CO_2 annually compared to the existing electric power generation.

The Air Water Group will make continued contributions to the reduction of greenhouse gases through its electric power business.

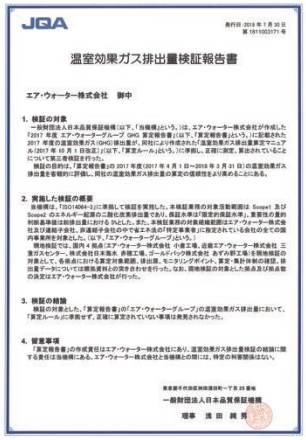
Efforts to Reduce Greenhouse Gas Emissions

The Air Water Group has set the target of reducing energy consumption by an average rate of at least 1% per year over the mid to long term (over the past five fiscal years) in its efforts to reduce its greenhouse gas emissions.

Especially, the companies designated as Specified Business Operators under the Energy Saving Act, which consume a large amount of energy, have formulated a mid- to long-term plan and, accordingly, are working on the improvement of capital investments and operations. Key matters in the mid- to long-term plan for fiscal 2017 are as shown in the table below.

Third-party Verification of Greenhouse Gas Emissions

The Air Water Group discloses greenhouse gas emissions in the Air Water Report and on its website. To ensure that the data we provide are highly transparent and verified from an independent, objective perspective, we have received third-party verification for our greenhouse gas emissions since fiscal 2017.


JQA

温室効果ガス排出量検証報告書

エア・ウォーター株式会社　御中

1. 検証の対象

2. 実施した検証の概要

3. 検証の結論

4. 留意事項

一般財団法人日本品質保証機構

理事　池田 純男

Greenhouse Gas Emissions Verification Report

In fiscal 2018, we received verification of our greenhouse gas emissions for fiscal 2017 by the Japan Quality Assurance Organization (JQA).

We will continue working to provide even more reliable data to outside stakeholders through third-party verification of our greenhouse gas emissions.

■ Air Water Group's Major Mid-to long-term Plans for Greenhouse Gas Emissions Reduction (FY2017)

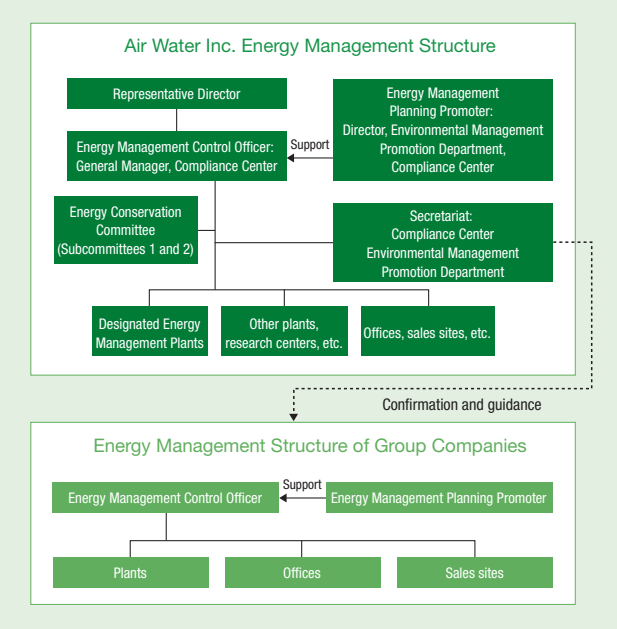
Company name	Target plants	Plans	Greenhouse gas emissions reduction (t-CO_2/year)	Fiscal year
Air Water Inc.	Kashima Plant	· Setting up a high-efficiency oxygen plant · Introducing inverter for pumps to reduce electricity use	9,347	–2021
Kinki Air Water Inc.	Mie Gas Center	· Modifying equipment to enable use of waste gas from nitrogen plants as renewed gas for PSA · Upgrading clean dry air equipment to larger, higher-efficiency equipment	5,660	–2022
Nihonkaisui Co., Ltd.	Sanuki Plant	· Upgrading ion-exchange membranes	2,099	–2019
	Ako Plant	· Upgrading ion-exchange membranes to save electricity and steam · Improving efficiency in dialysis electricity consumption by reducing leak volume · Reducing electricity use by improving efficiency of impellers of pumps and fans · Improving product yield · Reducing unburned amount of boilers	713	–2019
Kawasaki Kasei Chemicals Ltd.	Kawasaki Plant (Chidori)	· Installing equipment to make effective use of steam · Upgrading lighting equipment to energy-saving models · Upgrading and improving pumps, blowers, and compressors	401	–2024

Energy Management Structure

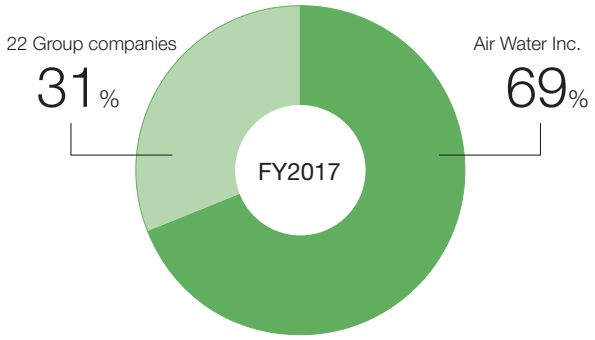
As a Specified Business Operator under the Energy Saving Act, Air Water has established an environmental management structure with the Compliance Center General Manager acting as the Energy Management Control Officer.

This has included establishing the Energy Conservation Committee (Subcommittee 1), which is made up of production plants with high levels of energy use, and Energy Conservation Committee (Subcommittee 2), which is made up of plants and business sites with relatively low levels of energy consumption. Each subcommittee holds meetings on a regular basis. In fiscal 2017, meetings were held to exchange information on the revision of the Energy Saving Act, results of the energy conservation plans of each plant or business site, and other related matters.

At Group companies, the Compliance Center checks their energy management structures and provides guidance through environmental audits, and also provides instructions and information through the Information Liaison Conference of Energy Management Staff, Environmental Information, and other means.



■ Energy use ratios within Air Water Group
(Specified Business Operators under the Energy Saving Act)



Information Liaison Conference of Energy Management Staff

Since 2015, Air Water has held the Information Liaison Conference of Energy Management Staff for Group companies designated as Specified Business Operators under the Energy Saving Act. The conference for fiscal 2017 was held on December 12, with 41 participants, largely the Energy Management Planning Promoters and energy managers of Group companies and plants.

There were talks by outside instructors, as well as discussions on energy conservation at the Group based on information provided by the Environmental Management Promotion Department of the Compliance Center and presentations of energy-saving practices.

Information Liaison Conference of Energy Management Staff

Award for Excellence in Energy Conservation

Air Water honors Group companies and business sites that have demonstrated excellence in energy conservation activities. This program is intended to raise the motivation of companies and sites while further promoting energy conservation activities.

In fiscal 2017, Saveur SS Inc. received the award for its achievement in reduction of unit energy consumption and excellent energy conservation efforts.

Saveur SS Inc.

Efforts by Plants and Offices

Among Air Water and its consolidated subsidiaries, presently 23 companies are designated as Specified Business Operators under the Energy Saving Act, working on energy conservation and CO_2 reduction.

In the Evaluation System by Business Operator Class that went into operation under the Energy Saving Act in fiscal 2017, the Group has 10 S Class (Superior Business Operator) companies*, accounting for 43% of all Group companies, up 11 points from the 32% of the previous year.

* Evaluation based on fiscal 2017 results

<Mid-to long-term and Annual Goals of Addressing Global Warming (energy conservation)>

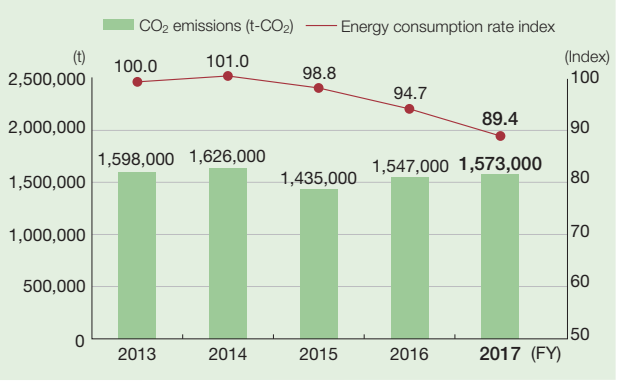
Against the target of reducing unit energy consumption by an average rate of at least 1% per year over the mid-to long-term (over the past five fiscal years), Air Water has achieved reduction at an average rate of 2.8%. Air Water has also achieved the target of reducing unit energy consumption from the previous fiscal year, with a reduction of 5.6%.

These achievements are mainly due to an increase in the gas supply volume in the Industrial Gas Business associated with improved efficiency in plant operations, plant upgrading to higher-efficiency types, and partial replacement of internal power generation facilities in the Seawater business. We will continue working to reduce unit energy consumption and greenhouse gas emissions through the upgrading of facilities in the Industrial Gas Business to higher-efficiency plants and other initiatives.

Mid-to long-term and Annual Goals of Addressing Global Warming (energy conservation)

	Goal	Results	Evaluation
Mid- to long-term goal	Reducing unit energy consumption by an average rate of at least 1% per year over the mid-to long-term (over the past five fiscal years)	Reduced by 2.8%	○
Annual goal	Reducing unit energy consumption from the previous fiscal year	Reduced by 5.6%	○

Changes in Greenhouse Gas Emissions (t-CO_2) and Energy Consumption Rate Index regarding Air Water Group Energy Consumption



(Companies designated as Specified Business Operators under the Energy Saving Act)
17 companies in FY2013, 15 companies in FY2014, 15 companies in FY2015, 19 companies in FY2016, 23 companies in FY2017

Efforts in Transportation Field

Efforts as a freight consigner

As a freight consigner, the Air Water Group promotes energy conservation and reduction of greenhouse gas emissions in collaboration with transportation companies.

<Mid-to long-term and Annual Goals of Addressing Global Warming (energy conservation)>

No increase or decrease was marked in comparison with the target of reducing unit energy consumption by an average rate of at least 1% per year over the mid-to long-term (over the past five fiscal years). The figure increased by 0.5% from the previous fiscal year.

This is due to an increase in demand from industrial gas customers in fiscal 2017, which required backup transportation from distant plants, as well as an increase in customers for long-distance transportation in fiscal 2015 and 2017.

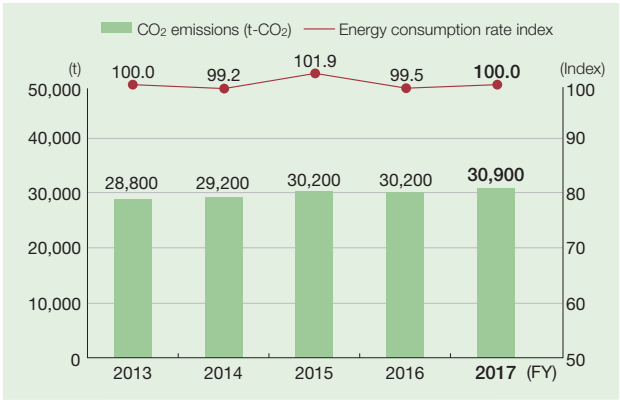
We will continue working to reduce unit energy consumption and greenhouse gas emissions by setting up new VSUs (compact liquefied oxygen/nitrogen production plants) to conduct efficient delivery* in the Industrial Gas Business, and promote full loading of trucks and ships for land and marine transport and the introduction of large ships in the Seawater business.

* For details of efficient delivery by installation of VSU, see the feature article on pp.15 and 16.

Mid-to long-term and Annual Goals of Addressing Global Warming (energy conservation)

	Goal	Results	Evaluation
Mid- to long-term goal	Reducing unit energy consumption by an average rate of at least 1% per year over the mid-to long-term (over the past five fiscal years)	No increase/ decrease	△
Annual goal	Reducing unit energy consumption from the previous fiscal year	Increase by 0.5%	×

Changes in Greenhouse Gas Emissions (t-CO_2) and Energy Consumption Rate Index regarding Consigned Transport



(Companies designated as Specified Consigners under the Energy Saving Act)
2 companies in FY2013 through FY2017

VSU contributing to energy conservation and CO_2 emissions reduction in the transportation field

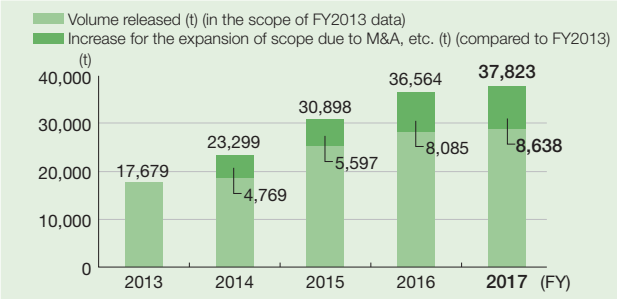
Efficient Use of Resources

Appropriate Disposal of Industrial Waste

The Air Water Group makes efforts to reduce waste through practicing the 3Rs (reduce, reuse, and recycle), and properly monitors the amount of waste discharge. In addition, we conduct appropriate disposal in accordance with the Waste Disposal Act, which includes entrusting disposal to contractors certified by the government authorities.

The volume of waste increased mainly due to an increase in the number of Group companies in fiscal 2014, the establishment of biomass power plants in fiscal 2015, and an increase in Group companies and rise in operating hours of biomass plants in fiscal 2016.

■ Changes in the Amount of Industrial Waste Discharge



(Plants identified as business operators discharging a vast quantity of waste under the Waste Disposal Act)
7 companies in FY2013 (11 plants), 8 companies in FY2014 (13 plants), 9 companies in FY2015 (14 plants), 10 companies (15 plants) in FY2016 through FY2017

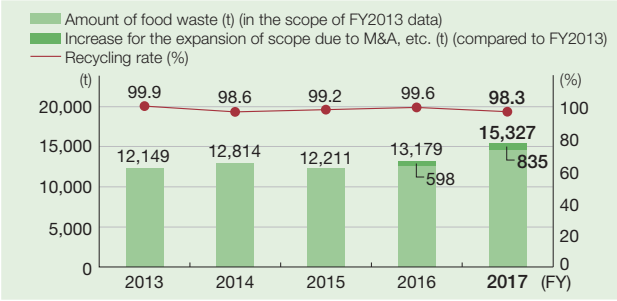
Food Recycling

The Air Water Group makes active efforts for reduction and recycling of food waste discharged from plants under the Agriculture and Food Products Business, having achieved a recycling rate of over 98%. In addition, companies that generate a vast quantity of food product waste submit reports to the government in accordance with the Food Recycling Act.

In fiscal 2017, the amount of food waste generated increased, mainly due to an increase in production of plastic-bottled coffee.

We will make continued efforts to maintain and improve the recycling rate, such as promoting the use of vegetable residues as fertilizers in partnership with disposal contractors.

■ Food Waste and Recycling Rate



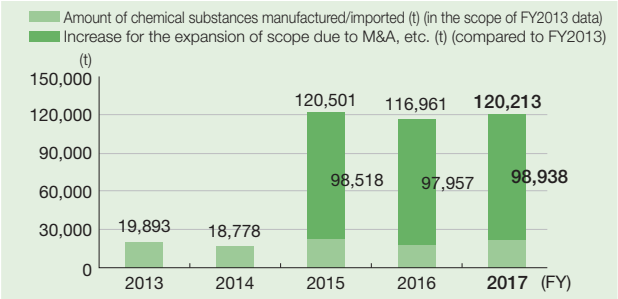
(Companies identified as business operators discharging a vast quantity of food waste under the Food Recycling Act)
3 companies in FY2013, 3 companies in FY2014, 3 companies in FY2015, 4 companies in FY2016, 4 companies in FY2017

Proper Management of Chemical Substances and Air Pollutants

Amounts of Chemical Substances Manufactured/Imported

The Air Water Group properly monitors the quantities of chemical substances manufactured and imported to control chemical risk, and reports the quantities manufactured and imported to the national government in accordance with the Chemical Substances Control Act. The amount of chemical substances manufactured increased in fiscal 2015 because new Group companies related to chemical business were added to the scope of calculation.

■ Amounts of Chemical Substances Manufactured and Imported

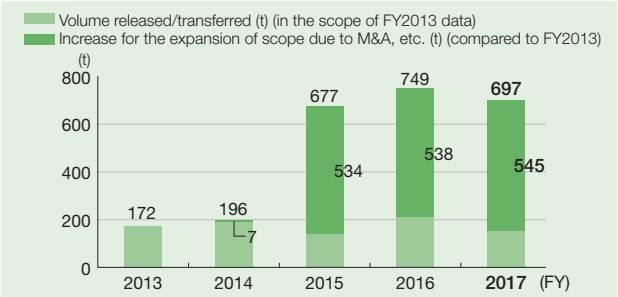


(Companies subject to notification of general chemical substances or chemical substances requiring priority assessment under the Chemical Substances Control Act)
2 companies in FY2013, 2 companies in FY2014, 4 companies in FY2015, 4 companies in FY2016, 5 companies in FY2017

Amounts of Chemical Substances Released/Transferred

The Air Water Group properly monitors the quantities of chemical substances released and transferred, and its businesses handling one ton or more of Class 1 designated chemical substances report the quantities released and transferred to the national government in accordance with the PRTR Act. The amounts of chemical substances released/transferred increased in fiscal 2015 because new Group companies related to chemical business were added to the scope of calculation.

■ Amounts of Class 1 Designated Chemical Substances (PRTR substances) Released/Transferred (t)



(Plants identified as business operators handling a Class 1 designated chemical substance, etc. under the PRTR Act)
7 companies in FY2013 (10 plants), 8 companies in FY2014 (12 plants), 9 companies in FY2015 (13 plants), 9 companies (12 plants) in FY2016, 10 companies (14 plants) in FY2017

Efforts to Reduce Emissions of SOx and NOx

The Air Water Group is working on the reduction of SOx and NOx, which may cause acid rain.

At the Air Water's plants for the Chemical Business, desulfurization equipment was upgraded in fiscal 2016 to improve the efficiency of SOx collection. In fiscal 2017, emissions of SOx decreased by approx. 16 t (66%) from the previous year because the new desulfurization equipment was operated throughout the year.

Promoting Environmental Businesses

Reducing Greenhouse Gas Emissions by Woody Biomass Power Generation, and Electric Power Selling Business (Ako Plant, Nihonkaisui Co., Ltd.)

In 2015, Ako Plant of Nihonkaisui Co., Ltd., an Air Water Group company, at the time of renewing power generation facilities introduced an integrated cogeneration power system that uses woody biomass and natural gas, having succeeded in reducing 170,000 tons of CO_2 emissions per year. The Plant received the "fiscal 2016 Environment Minister's Award for Global Warming Prevention Activity" for reducing CO_2 emissions in Ako City by 4% and contributing to environment-friendly regional development by promoting the use of forest thinnings.

The electricity and steam generated by the plant are used in internal salt manufacturing and also sold to outside parties. At present, the Ako No. 2 Biomass Power Plant for electricity sales is under construction. The projected effect of the new power plant in terms of reduction of CO_2 emissions is expected to be 110,000 tons a year (start of operation scheduled for the first half of fiscal 2020).

The Air Water Group will make continued contributions to the reduction of greenhouse gas emissions by making use of renewable energy sources.

Ako Plant, Nihonkaisui Co., Ltd. Biomass power generation facilities

ECOROCA® Composite Wood-Plastic Material for Efficient Resource Use (Air Water ECOROCA Inc.)

ECOROCA® is an eco-construction material that makes use of underutilized resources, including scrap wood and scrap plastic.

The product combines the superior features of both wood and plastic to provide a high level of durability and safety without the need for maintenance. It is used in decking, louvers, walls, and other applications as an alternative to natural wood products. In addition, in recent years, applications have expanded to use as a civil engineering material in road work and other projects. Recently, transactions with overseas customers have increased, including delivery for a shopping mall in Barcelona, Spain.

ECOROCA® decking

We will continue developing products using composite material technologies cultivated in turning underutilized resources into raw materials, and providing products suitable for a sustainable society.

Helping Realizing a Hydrogen Energy Society

"Air Water Mobile Hydrogen Station Sapporo," first commercial hydrogen station in Hokkaido, starts operation

Air Water, the only industrial gas manufacturer in Hokkaido that manufactures and supplies industrial hydrogen gas, has abundant knowledge and technologies in everything from manufacturing, storage, and transport to usage of hydrogen gas. Taking advantage of such know-how and toward realization of a hydrogen-powered society in Hokkaido, the company has been proactively launching initiatives for the promotion of fuel cell vehicles (FCVs) and fuel cell forklifts in ongoing collaboration with local municipalities.

In April 2016, Air Water designed and manufactured a mobile hydrogen station organized by Muroran City, and has been entrusted by the City to undertake operation and management of the station.

In January 2017, Air Water, under contract with the Environment Ministry, opened the Shikaoi Hydrogen Farm, a hydrogen manufacturing and supply facility, in Shikaoi Town, Kato-gun, where demonstration tests of the hydrogen supply chain using hydrogen gas derived from livestock excrement are conducted, thus contributing to the realization of a low-carbon hydrogen-powered society based on local production for local consumption.

Furthermore, in March 2018, Air Water commenced operation of the Air Water Mobile Hydrogen Station Sapporo, the first commercial hydrogen station in Hokkaido. This is a project under the Sapporo City Plan for the Promotion of Fuel Cell Vehicles formulated by the Sapporo City government, intended to help promote the spread of FCVs in Hokkaido. Air Water will be in charge of the operation of the Station, thereby contributing to the spread of fuel cell vehicles in Hokkaido.

Opening ceremony of Air Water Mobile Hydrogen Station Sapporo

Social

Products and services provided by Air Water contribute to people and society in broad fields, such as manufacturing, medical and nursing care, food, energy, and logistics. Air Water's diverse Group companies conduct businesses closely tied to their local communities. The trust of our stakeholders is the basis of our businesses. We are aware that improving our own value always from the standpoint of our stakeholders is the key to our business management.

- **Offering Safe and Secure Products and Services**
- **Utilizing Diverse Personnel and Creating Rewarding Workplaces**
- **Pursuing Stable Return of Profits in Line with Performance and Building Trust**
- **Enhancing Supply Chain Management to Promote Fair Business Practices**
- **Promoting Activities Closely Tied to and Rooted in Local Communities**

Offering Safe and Secure Products and Services (Commitment to Customers)

Basic Approach to Customers

Air Water is working every day to offer products and services that meet its customers' high expectations and earn their trust.

We are making Group-wide efforts toward further improvement of quality, focusing on safety and security.

Company-wide Policy on Quality

Offering products, goods, and services with quality appreciated by our customers with a word of thanks.

Air Water specifies basic matters necessary for quality assurance activities of each division and Group company as its quality assurance regulations.

In the quality assurance regulations, the company has established the Company-wide Policy on Quality, a common policy for the entire Group, under which quality assurance activities are promoted and the quality assurance awareness of employees is raised.

Ensuring Stable Supply of Industrial Gases

In 2016, Air Water introduced a 24-hour remote monitoring system for gas generation plants located around Japan. At present, this system is being used for building a backup system for use in an emergency, as well as for improvement of facilities by storage of operation data and factorial analysis of failures.

This system is operated at the Remote Control Support Center established in the Sakai Office, the center for engineering and design. It collects and visualizes data on operation and failures of facilities of the Air Water "V1" high-purity nitrogen gas generators, "VSU" high-efficiency compact liquefied oxygen/nitrogen production plants, and PSA or other gas generating plants. This gathering of information has enabled clearer identification of the priority items in maintenance. This is effective in preventive maintenance and also useful in improving equipment design. To use the gathered data more effectively, skilled engineers are assigned to the Center to help enhance the technical capabilities of the Center staff.

Air Water will ensure stable gas supply by effectively utilizing the Remote Control Support Center, thereby fulfilling its responsibility to customers.

Remote Control Support Center

LP Gas Initiatives for the Safety, Security, and Trust of Customers

For the safety and security of customers in using LP gas, the Air Water Group has a system for taking calls from its approximately 200,000 customers in Hokkaido 24 hours a day, 365 days a year. When there is urgency, such as when a customer smells LP gas or a burner does not light property, the problem is handled by a service staff member who arrives on-site within 30 minutes from one of 100 locations around Hokkaido. In June 2018, the Group also launched a service on the LINE smartphone app as a new means of connecting customers with the call center. By pressing the "Emergency Call (gas smell/gas leak)" button on the screen inside the LINE app, customers can be connected to a call center operator, ensuring a safer and faster response.

In order to enable quick responses to natural disasters such as snowstorms, floods, and earthquakes, which have occurred

frequently in recent years, we are improving our security techniques through practical disaster preparedness drills, thereby earning the trust of our customers.

Using LINE app


A disaster preparedness drill

Measures for Quality Assurance

Quality Management Systems

In the Air Water Group, each Group company has acquired quality management system certifications (ISO 9001 and ISO 13485).

Within the Group, courses to train internal auditors are organized and support for obtaining certifications for quality management systems and for continuous improvement is provided.

Survey on Quality Risks

Driven by the occurrence of inappropriate acts such as falsification of quality data at other companies, Air Water conducted an internal survey to identify the risk factors of products that the Air Water Group handles and to determine the level of risks and the degree of risk control within the Group.

Based on the results of this survey, we will conduct activities to remove or reduce the existing quality risks.

Sharing Information on Quality Assurance

Air Water issues “Quality Assurance Information” and circulars to share information on quality assurance with the quality assurance managers and staff in charge at all divisions and Group companies.

In fiscal 2017, notifications were issued on a change to the deputy chief quality assurance manager and the company-wide quality target for fiscal 2017 along with information on quality assurance training and other topics.


品質保証情報
平成 29 年度 全社品質目標について
Quality Assurance Information

Quality Assurance Workshop

Air Water holds various types of quality assurance workshops in order to raise awareness on quality assurance and share information and technologies within the Group. In fiscal 2017, in response to the revision of the ISO 9001 quality management system to the 2015 version, workshops to train internal auditors were held in three locations around Japan.

We will continue to hold quality assurance workshops in a systematic manner so as to raise awareness on quality assurance and promote the sharing of information and technologies within the Group.


A quality assurance workshop

Measures for Food Safety

Food Safety System

Air Water established the Compliance Group within the Agriculture and Food Company in fiscal 2017 and has reinforced audits and instructions for the Group companies and food-related independent business companies under the Agriculture and Food Company in cooperation with the Food Safety Management Department at the Compliance Center. Air Water also provides guidance and conducts checking concerning various food-related laws and regulations, such as HACCP and the Food Labeling Act, to ensure compliance.

In January 2018, Q&C Co., Ltd., a Hokkaido-based company specializing in providing support for the introduction of various certificates (HACCP, FSSC, etc.), sanitation management guidance, microorganism testing, etc., joined the Air Water Group. With this, we will reinforce the quality management function of the Agriculture and Food Products Business and further improve our food safety.

Furthermore, in fiscal 2017, a seminar to develop internal auditors for the food safety management system was newly organized and held at two sites in Tokyo and Sapporo on the theme “Effective Internal Audit Techniques.”

Workshop for Food Safety Staff

Air Water holds workshops for food safety staff members aimed at sharing information and technologies concerning “food safety and security,” improving knowledge and awareness, and preventing food accidents.

In fiscal 2017, 45 quality management and assurance staff members from 19 Group companies related to food products and agriculture participated. The workshop programs included a tour of the main plant of Air Water Tokachi Foods Co., Ltd., as well as training on “risk management at a food plant” to learn measures to prevent food accidents, countermeasures if a food accident occurs, etc. along with group exercises.


Participants in the food safety staff training workshop

Utilizing Diverse Personnel and Creating Rewarding Workplaces (Commitment to Employees)

Basic Approach to Employees

The Air Water Group is made up of a variety of Group companies engaged in a range of business activities. We protect the human rights of diverse personnel, respect their individuality and character, ensure safety and health, and strive to create workplaces that allow each person to work with energy and a sense of purpose.

Basic Policy on Human Resources

<Respect for the Individual>
We strive to establish programs that can be chosen by employees in order to respect the will of each and every individual.
<Recognition of Ability and Performance>
We appropriately recognize ability and performance without regard to age or educational background and structure compensation accordingly.
<Personnel Development>
We support each employee's desire for growth through a development-oriented support system and help them achieve their career plans through ongoing skill development and performance opportunities.

Workplaces for Women's Participation and Advancement

● Women's Participation and Advancement Promotion Project

The Women's Participation and Advancement Promotion Project was launched in 2016, with CEO Masahiro Toyoda as the chief officer and Director Yukiko Sakamoto (outside director) as special advisor, in order to further develop a corporate culture and workplace conditions that enable women to work with energy and a sense of purpose at the Air Water Group. The themes of the Project's activities are as follows:

(1) Improving the workplace culture: Offered training programs for management-level employees, such as a workshop on the career management of subordinates and the 360-degree feedback training, with the aim of improving the workplace culture for personnel development.
(2) Actively hiring women: As a result of enhancing recruitment of women since 2016, the ratio of female employees to total new recruits exceeded 30% of the recent three-year average, higher than the initial target.
(3) Supporting career development: Introduced an individual career development program in which each female or young employee considers their career development from a medium-term perspective through interviews with their supervisors. Also modified the personnel system so as to allow every worker to advance in his/her career; specifically, changing the criteria for promoting fixed-term contract employees performing clerical work to regular employment contracts and integrating clerical workers in the category of area-specific management track.
(4) Actively promoting motivated women: The number of female managers and supervisors (superintendent class) has been steadily increasing, and the ratio of female employees in the superintendent class reached 8.8% as of June 2018, achieving the target earlier than the plan.
(5) Realizing work-life balance: Introduced programs to facilitate continued employment, such as a flex-time program, leave of absence upon spouse's transfer, and job return program.

The Women's Subcommittee of the Project conducted activities led by female employees, such as visiting business sites and Group companies to hear directly from people at workplaces and planning seminars to encourage exchange between female employees. We will continue to implement various measures to develop a corporate culture that allows all employees to play active roles.


A training seminar for managers


Diversity Forum organized by the Women's Subcommittee

Promoting Work Style Reform

● "Merihari 20" Activities to Improve Work Methods

The Air Water Head Office began promoting "Merihari 20" (meaning "on-off 20") activities in July 2015 as a joint labor-management project, with the goal of making 8:00 p.m. the knock-off time at offices. All employees from each division and department participate in achieving the goal by combining their wisdom, gaining an understanding of one another, and cooperating and coordinating to work more efficiently and effectively. In September 2017, similar activities were launched at the Tokyo Office under the name "Merihari Work Kamiya-cho."


A "Merihari 20" meeting

● Measures for Appropriate Working Hours Management

Air Water strengthened the management functions of its attendance management system in 2016 to ensure appropriate working hours management. The company also introduced in 2017 an advanced attendance management system using individual IC cards for each employee at the Tokyo Office and other major sites.

● Support for Balancing Work and Nursing Care

In order to promote continued employment by employees providing nursing care to family members, Air Water has instituted various

support programs related to working hours, including nursing care leave, vacation days, and a flex-time program.

Going forward, we will work to further develop employment conditions in line with Air Water's characteristics that help employees balance nursing care and job responsibilities.

Preventing Workplace Harassment

Harassment in the workplace is socially sanctioned conduct that improperly impinges on the personal dignity of an employee.

Air Water has always stipulated in its labor agreements, employment rules, and Code of Ethical Conduct that harassment is absolutely prohibited and that no employee may engage in it. Based on the workplace harassment prevention guidelines in connection with maternity and childcare leave, nursing care leave, and other such programs formulated in fiscal 2016, we strive to further enhance knowledge and responsiveness in connection with harassment, even more thoroughly ensure that harassment is not perpetrated, ordered, permitted, or overlooked, and further develop safe and pleasant workplace environments defined by mutual respect demonstrated by all employees.

Mental Healthcare Initiatives

A stress check program is among Air Water's comprehensive initiatives for employee mental health care, which we conduct on a planned, ongoing basis.

The stress check program is intended to prevent mental health problems before they can occur by having employees understand their own stress levels and use that knowledge in caring for themselves and by enabling the company to grasp the state of the workplace and use this information to create more pleasant working conditions.

The results of the stress check are conveyed directly by the outside professional organization to the employees checked, and employees are also able to consult with specialists via an outside consultation desk without going through the company. In addition, when submitting a request to the company, employees are able to talk with an industrial physician or other specialist and receive guidance.

We will continue improving the workplace environment based on the findings of stress check analysis.

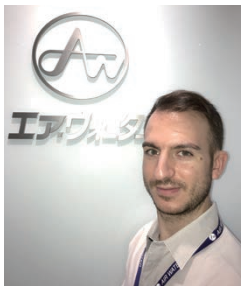
Personnel Development

Air Water conducts personnel development aiming at the ideal of a company where each employee amply demonstrates his or her abilities with energy and a sense of purpose. In fiscal 2018, while continuing to promote the education of young employees and the active participation of women as priority tasks, we will implement various personnel measures with emphasis on education and development with the aim of effectively utilizing diverse human resources and enhancing diversity in our organizations.

Hiring and Promoting Global Personnel

Along with the expansion of its overseas businesses, Air Water has been expanding its recruitment and promotion of employees with foreign nationalities. Michele Malvisi , who joined Air Water in January 2018, works in theGlobal Solution, Medical Company's Overseas Medical Business Div., in charge of operations related to M&A of overseas companies.

"I decided to join Air Water because I thought that I would be able to make use of my knowledge and skills for the company in expanding businesses overseas. My coworkers are all very friendly and I feel comfortable working with them. I feel great satisfaction in discovering overseas companies that agree with Air Water's vision and are willing to grow together with us. I am aware of the growth of the company and of myself while tackling my everyday tasks.



Michele Malvisi
Global Solution, Medical Company's Overseas Medical Business Div

Relationship with the Labor Union

Air Water believes that the relationship between labor and management is like that of the wheels of a vehicle. We strive to establish a firm, collaborative relationship that always advances in the right direction through the mutual exchange of frank opinions, while respecting each other's positions and maintaining an appropriate distance.

In fiscal 2017, we revised our wage tables based on consideration of economic trends and other factors by the wage committee together with the labor union. The labor union participates in the Women's Participation and Advancement Promotion Project and the "Merihari 20" activities described above as part of the joint labor-management efforts for the establishment of better workplace environments.

Creating Safe and Secure Workplace Environments

Safety and Health Basic Policy

1. We aim to achieve zero work-related accidents, and advance comprehensive and systematic safety measures.
2. We promote the formation of a comfortable workplace environment, while securing employee safety and health.
3. We comply with all related laws and operating procedures, and create workplaces with clear lines of responsibility concerning occupational safety, traffic safety, and occupational health, as well as safety and disaster prevention.

Under the above Basic Policy, through providing safety and health education, we raise the awareness of each employee and promote the creation of a corporate culture that places the highest priority on safety and health.

Safety and Health Structure

Air Water has established the Central Safety and Health Committee to secure workplace safety and health. Operating under the supervision of the director of the Safety and Health Management Headquarters, the Central Safety and Health Committee meets on a regular basis.

The minutes of the Central Safety and Health Committee meetings are disclosed internally using corporate networks for information sharing.

■ Safety and Health Structure Chart

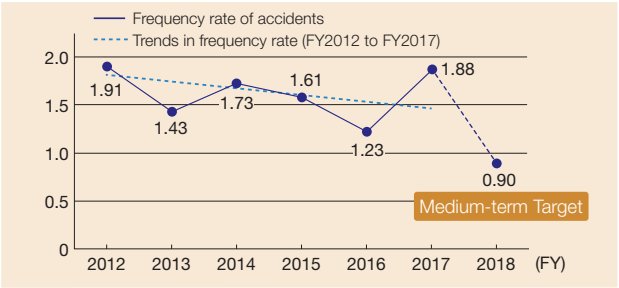
Industrial Accident Statistics

At the Air Water Group in fiscal 2017, there were 84 cases of accidents associated with days away from work, a significant increase from the previous year (51 cases). The frequency rate of accidents associated with days away from work* was 1.88, also an increase from the previous year (1.23), with an increase in accidents involving falls. This was also partly due to an increase in the number of Group companies. For fiscal 2018, we are making efforts to achieve the medium-term target of 0.90 or lower for the frequency rate of accidents associated with days away from work.

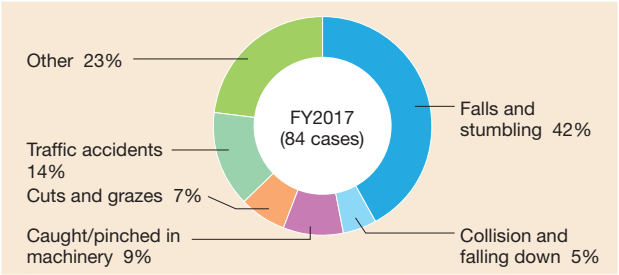
Breaking down accidents in fiscal 2017, about half the accidents involved "Falls and stumbling" or "Collision and falling down." Combined with "Caught or pinched in machinery," these accidents accounted for about 60% of the total. Traffic accidents decreased from the previous year to account for around 14% of the total.

* Frequency rate of accidents associated with days away from work
Frequency rate is an indicator for the frequency of industrial accidents. It is expressed as the number of people involved in an accident per one million total working hours. Taking into consideration the types of business as well as the number and composition of employees, the Air Water Group has set the medium-term target for the frequency rate of accidents associated with days away from work as 0.90 or below for the period fiscal 2016 to fiscal 2018.

Frequency rate of accidents for cases associated with days away from work



Breakdown of accidents associated with days away from work



Initiatives to Reduce Work-related Accidents

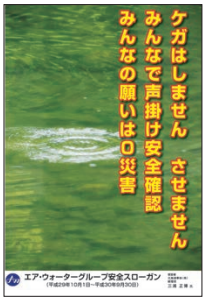
Air Water has conducted activities to eradicate falling-related accidents since fiscal 2015 as a priority health and safety initiative. In fiscal 2016, we added measures to prevent collisions. In addition, to reduce work-related accidents caused by human error, we reinforced measures to prevent human error. In fiscal 2017, we continued our efforts to reduce work-related accidents focusing on activities to eradicate accidents related to collisions and falling down, and caught or pinched in machinery accidents.

We put up posters on preventing accidents involving falls and collisions in places with the potential for such accidents to occur, conduct workplace patrols using the check sheet for preventing fall and collision accidents or the check sheet for hazard prediction, promote "4S" (Sort, Set in Order, Shine, Standardize) activities; and work to make hazard areas visible. In this way, we are working through various activities to fully raise awareness at the workplace.

Safety Slogans

On the occasion of National Safety Week, which is held every July, Air Water solicits "safety slogan" proposals from all employees, including employees at Group companies, in order to raise awareness around safety.

This contest provides a good opportunity for employees to think about safety at work and at home, and in fiscal 2017 there were 7,556 proposals submitted.



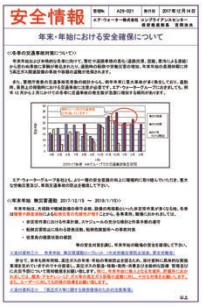
Safety slogan poster (FY2017)

An award is given for the best entry, and the slogan is displayed on safety posters in each workplace. In addition, the company with the highest entry rate and the company that provided the largest number of proposals are given awards for excellence in safety and health within the Group, with the aim of commending company-wide positive activities.

Sharing Safety Information

Air Water distributes "Safety Information," which includes information on topics such as accidents that have occurred within the Group and promotes activities for occupational safety and health at each workplace, through the corporate network.

In the event of the occurrence of an incident associated with days away from work, which is often a trigger for a major or serious accident, we immediately carry out risk analysis of the incident and document the direct causes and countermeasures for recurrence prevention, and disseminate the information throughout the Group.



Safety Information

The sharing of information among employees helps increase awareness about the working environment and promote the spread of workplace improvement activities, thus leading to prevention of similar accidents. In fiscal 2017, the publication was issued 31 times.

Safety Training

Air Water offers various training programs related to safety. In fiscal 2017, we conducted safety staff training with the Group's staff members in charge of safety and health as well as technical training on high-pressure gas safety for employees who work with high-pressure gas.

Training was also held on causes of accidents that have tended to occur frequently in the Group, including on preventing falls and collisions and on preventing getting pinched or caught. Other training included training on preventing human error to reduce human risk associated with unsafe activities, and training on risk assessment for chemical materials, which was targeted at Group sites that manufacture or handle chemical substances for which management is mandated under the Industrial Safety and Health Act.


Safety-awareness training

Pursuing Stable Return of Profits in Line with Performance and Building Trust (Commitment to Shareholders and Investors)

Basic Approach to Shareholders and Investors

We actively communicate with shareholders and investors to help deepen their understanding of Air Water's businesses and management strategies and also work to build trust on a stable, long-term basis by returning profits to shareholders in line with performance.

Communication with Shareholders and Investors

Air Water strives to disclose appropriate information in a timely manner and to proactively communicate with shareholders and investors through providing company information on our website and in publications, holding the general meeting of shareholders, and conducting IR activities both inside and outside Japan, among other activities, in order to build stable, long-term, trust-based relationships and provide shareholders and investors with an accurate understanding of our distinctive strategies and business model.

The information is disclosed and delivered earlier to shareholders in the Notice of Convocation of general shareholders' meeting on our website. We also issue shareholder reports twice a year that seek to provide a clear presentation of our business activities and performance.

For institutional investors and analysts, we hold earnings briefings each quarter via teleconferencing, arrange individual meetings, and organize an annual financial results briefing in which the president and responsible personnel of each business division participate. We also hold conferences for overseas institutional investors, in which the president also participates to have direct talks with overseas investors.

Financial results briefing

■ Communication events for institutional investors and analysts in FY2017

◎ Briefing for institutional investors and analysts: 1
◎ Teleconferences for institutional investors and analysts: 4
◎ Conferences hosted by securities firms: 4
◎ Individual meetings with institutional investors and analysts: 147

We will continue to promote proactive communication in order to maintain and develop stable, long-term, trust-based relationships with our shareholders and investors, as well as analysts.

Disclosure Policy

Air Water endeavors to ensure prompt information disclosure to its shareholders and investors based on the principles of transparency, fairness, and continuity. In disclosing information, we comply with the Rules on Timely Disclosure of Corporate Information by Issuers of Listed Securities of the Tokyo Stock Exchange (hereinafter, "Timely Disclosure Rules"). We also endeavor to proactively disclose information not subject to the Timely Disclosure Rules in a timely manner.

Method of Information Disclosure and Efforts to Ensure Fair Disclosure

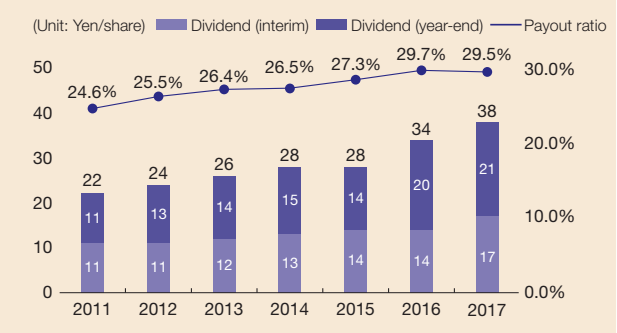
Information subject to the Timely Disclosure Rules is disclosed in accordance with the Rules via the Timely Disclosure Information System (TDnet) provided by the Tokyo Stock Exchange. Disclosed information is promptly posted on the Air Water IR website in principle. We also endeavor to disclose information not subject to the Timely Disclosure Rules according to the purpose of timely disclosure, so as to ensure that information is communicated correctly and fairly to investors.

Basic Policy on Shareholder Returns

Air Water works to strengthen its operating base to increase corporate value on a sustained basis and at the same time has positioned returning profits to shareholders as one of the most important tasks of management.

For this reason, our basic policy on dividend distribution is to pay a stable dividend in line with performance into the future, with a target payout ratio of 30% of consolidated net income, while maintaining adequate focus on enhancing internal reserves necessary for strategic investment and other measures to achieve growth over the medium to long term.

■ Payout Ratio



Enhancing Supply Chain Management to Promote Fair Business Practices (Commitment to Suppliers)

Basic Approach to Suppliers

For the continued growth of its business, Air Water strives to comply with laws and observe agreements with customers, suppliers, and other parties, and to maintain and improve trust-based relationships with its stakeholders. We promote fair business practices and hope to grow together with our stakeholders.

Purchasing Approach

Air Water has established its purchasing approach in the Purchasing Management Regulations as follows.

- Air Water selects its suppliers based on a comprehensive evaluation rooted in economic rationality. Selection is made without regard to nationality, location, or size of business, and new entrants are always given a fair and impartial opportunity to participate.
- In conducting its purchasing activities, Air Water considers conservation of resources and environmental protection. In addition, the company ensures that related laws as well as its own regulations and circulars are fully understood and observed.

Fair Dealings

Compliance Training Seminars

Air Water regards maintaining and developing good relations with suppliers based on fair dealings as an important task of management and also understands this to be an important pillar of compliance.

In fiscal 2017, compliance training seminars focused on compliance with the Antimonopoly Act, Subcontract Act, Construction Industry Act, and other related laws for newly appointed managers and newly hired employees, as well as the representatives and management supervisors of companies that newly joined the Air Water Group.

Compliance Handbook

The training, which included explanation of the contents of the Compliance Handbook distributed to all Group employees, served to broadly communicate the importance of compliance.

Initiatives by Group Companies

Building Trust with Suppliers (Gold-Pak Co., Ltd.)

Gold-Pak Co., Ltd., an Air Water Group company, secures its quality standard by asking suppliers to submit a quality warranty upon purchasing raw materials. It also conducts audits of its suppliers as necessary to maintain appropriate quality, safety, environmental consideration, and compliance.

Moreover, the company invites its suppliers to Suppliers' Day every year. At this event, current situations of Gold-Pak and the Air Water Group are reported, and tours of related facilities, lecture sessions, and other programs are offered, with the aim of helping suppliers deepen their understanding of the Air Water Group.

Through these initiatives, the company has been building trust-based partnerships with suppliers and delivering safe and valuable products to customers.


A Suppliers' Day program

Promoting Green Procurement

Tateho Chemical Industries Co., Ltd., an Air Water Group company, promotes "green procurement" from the viewpoint of reducing the impact of business activities on the environment. Taking into consideration the environmental performance of the goods and services it procures in addition to their quality, price, and delivery time, the company procures raw materials, chemical additives, fuels, packaging materials, product transport, and products from suppliers that proactively promote environmental preservation activities.

Principles in Selecting Goods

We adopt the following principles in order to select goods that have little environmental impact in all stages of manufacturing, use, and disposal.

(1) Raw materials
Recycled raw materials or materials that are easy to recycle are used, and the amount and the number of types of raw materials used are small.

(2) Controlling use of hazardous substances, etc.
Prohibited substances are not used, and use of controlled substances is minimized.

(3) High reusability and recyclability
Repeated use (reuse) for the same purpose by refilling, etc. is enabled by design. Or use of recyclable materials or recycling is made easy by design or labeling.

(4) Durability
Durable life is long.

(5) Packaging materials
Few packaging materials are used, and they are reusable and recyclable.

(6) Energy-saving
Energy consumption in stages of manufacturing, use, etc. is low.

(7) Low environmental load in disposal
Degradable materials with low environmental impact are used or measures to prevent discharge of hazardous chemical substances are implemented for disposal by incineration or landfilling.

Promoting Activities Closely Tied to and Rooted in Local Communities (Commitment to Local Communities)

Basic Approach to Community Relations

The Air Water Group has eight regional business companies throughout the country and over 250 Group companies in various industries. These companies are closely tied to their local communities and pursue businesses rooted in those communities, while deepening communication with local community members to establish good relationships with them.

Providing Factory/Facility Tours

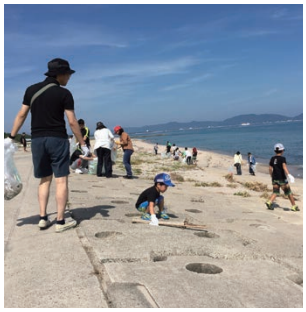
To promote understanding of the Air Water Group's business activities and its commitment to the environment and safety, the Group has invited visitors on tours of its facilities and factories.

Tour of the R&D Center of Air Water Safety Service Inc., which opened in June 2018

A factory tour at Air Water Tokachi Foods Co., Ltd.

Initiatives for Beautification and Greening

Each of Air Water's business sites supports beautification of local communities by participating in local cleaning and greening activities.



Neighborhood cleaning by Daisen Ham Co., Ltd.

Greening activity by Tateho Chemical Industries (Bagging of peaches)

Promoting Sports and Arts

Air Water supports the promotion of sports and arts through sponsoring sports or arts events in local areas.

Sponsoring Kyoto University's American football team, the "Gangsters"

Sponsoring the Matsumoto Marathon

Sponsoring a music festival (Seiji Ozawa Matsumoto Festival)

Health Support Activities

Toward achieving "health and productivity management," Air Water supports the health of people in local communities through such actions as sponsoring health-related events and holding sport lessons at accommodation facilities that the Air Water Group manages and operates as a designated manager.

Sponsoring Lung Walk, a charity walking event to raise awareness of COPD and other respiratory diseases and call for a ban on smoking

Health seminar held for local residents on nursing care prevention and health enhancement (Matsumoto City)

Support for Disaster-affected Areas

Activities in the Aftermath of the Hokkaido Eastern Iburi Earthquake

Air Water supported the prompt restoration of lifelines using the LP gas-powered mobile power source cars it has developed. For welfare facilities in Kitami and evacuation centers in Mukawa, as well as residents in the Obihiro City area, Air Water dispatched pickup truck-type mobile power supply vehicles capable of making small turns to supply electric power for refrigerators, electric fans, lighting, cellphones, and cooking. Moreover, the company donated 100 million yen to the Hokkaido prefectural government to support recovery and restoration of the area, and also provided water servers, mineral water, emergency food, and other necessities for evacuation centers in Abira and the Atsuma Commerce and Industry Association.

Mobile power supply vehicle providing electricity

Governance

The Air Water Group believes that conducting fair business activities, using general common sense, and gaining trust from all stakeholders is essential for continuous business growth and the maximizing of enterprise value. To this end, we believe that our most important management task is to make ceaseless efforts to establish comprehensive corporate governance by enhancing the internal control system, enforcing compliance, and reinforcing risk management.

- **Enhancing Corporate Governance**
- **Enforcing Compliance**
- **Reinforcing Risk Management**
- **Information Security**

Enhancing Corporate Governance

Compliance with Japan's Corporate Governance Code

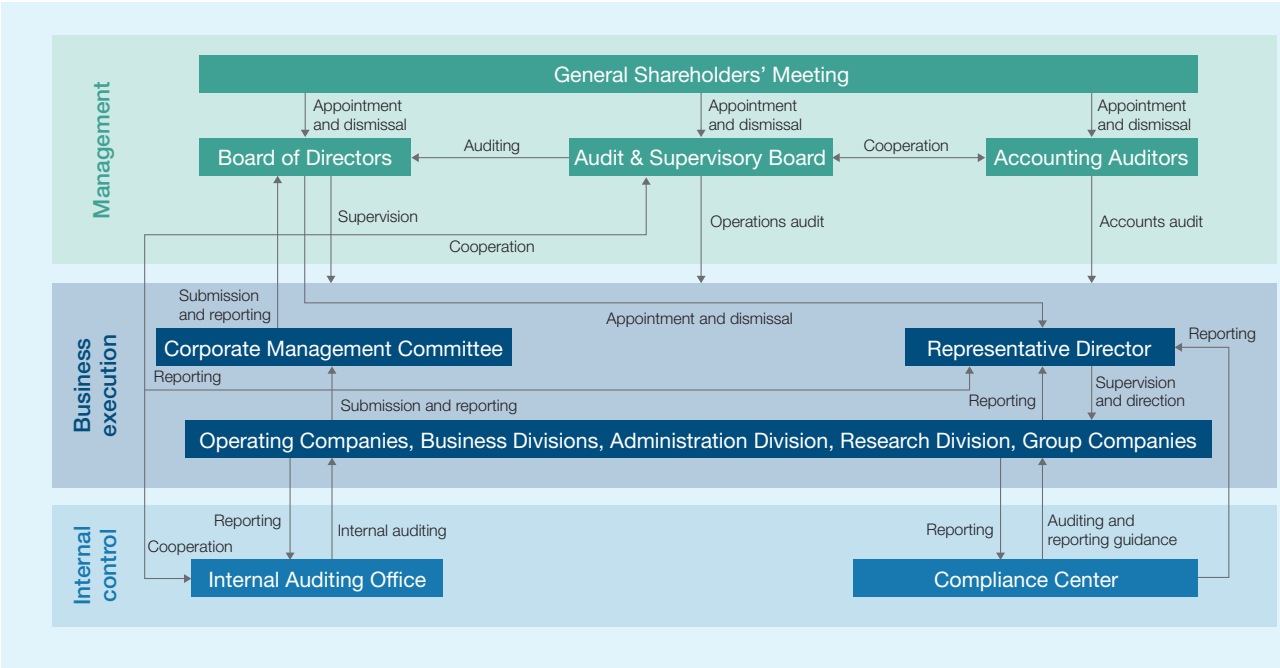
Air Water complies with all the requirements of Japan's Corporate Governance Code established by the Tokyo Stock Exchange, effective June 1, 2015. Part of the details of our compliance with the Code are reported in our Corporate Governance Report, which is available to the public on the company's official website.

Corporate Governance Report
http://www.awi.co.jp/csr/governance/

Summary of Corporate Governance System

Air Water is a company with an Audit & Supervisory Board, where the Board of Directors is responsible for making important management decisions and supervising business execution, and auditing of the execution of director duties and other matters is accomplished through Audit & Supervisory Board members attending meetings of the Board of Directors and other important committees. This management framework ensures appropriate decision-making and prompt business execution by directors while enabling proper supervision and monitoring of each director's performance of duties.

■ Corporate Governance Structure



<Directors and the Board of Directors>
Air Water's Board of Directors, which met 14 times in fiscal 2017, is comprised of a total of 20 members: 18 internal directors (of which none are women) and two outside directors (of which one is a woman). In addition to matters stipulated in laws, regulations and the Articles of Association, the Board of Directors makes decisions and receives reports on important matters related to the Air Water Group's management and business execution and also supervises and monitors individual directors. In addition, Air Water appoints two outside directors so as to receive recommendations and opinions that are beneficial to Air Water's management from an outside, objective perspective in order to further reinforce the Board of Director's management supervisory function. The term of office for directors is set at one year in order to make it possible to flexibly construct the optimal management framework in a rapidly changing business environment and to further clarify the management responsibilities of directors each fiscal year.

<Corporate Management Committee>
As the body that supports accurate and quick decision-making in the Group's wide-ranging fields of business, the Corporate Management Committee is comprised of executive directors at the level of managing director and higher, the general managers of each business division, and other key managers. The Corporate Management Committee, which meets once a month, in principle, conducts advance deliberations on the agenda items of the Board of Directors from wide-ranging and diverse standpoints, and also deliberates on important items related to the Air Water Group's business execution.

<Audit & Supervisory Board and A & SB Members>
Air Water's Audit & Supervisory Board, which met 15 times in fiscal 2017, is comprised of a total of five members: two internal A & SB members (of which none are women), and three outside A & SB members (of which none are women).

Air Water appoints three additional outside A & SB members so as to receive recommendations and opinions that are beneficial to Air Water's auditing from an outside, objective perspective in order to further reinforce monitoring and supervision of management. A & SB members work to grasp and monitor management execution by such means as attending Board of Directors meetings and other key meetings in accordance with the auditing policies and standards, etc. stipulated by the Audit & Supervisory Board, and conduct auditing to ensure that the execution of duties by directors conforms with laws, regulations, and the Articles of Association and that corporate operations are being executed properly through supervision and verification of the design and operation, etc. of the internal control system, including internal controls related to financial reporting.

A & SB members receive regular reports from the accounting auditors and internal auditing unit on the status of audits and findings, and exchange information and opinions with them.

<Internal Audits>
Internal audits are conducted regularly by the Internal Auditing Office, the company's internal auditing unit consisting of 11 full-time staff members, on the Air Water Group's compliance with laws, regulations, and internal rules and on the appropriateness and adequacy of the Group's business processes. The Internal Auditing Office also conducts monitoring and supervision of the construction and operation of the internal control system for ensuring the reliability and appropriateness of financial reporting, and with respect to evaluations of the system's effectiveness, the Office fulfills the role of lead managing division under the responsibility and direction of the representative director.

In addition, along with the Internal Auditing Office, Air Water has established the Compliance Center with 13 full-time staff members as the dedicated department for cross-Group management and governance in connection with compliance, disaster preparedness, and environmental protection. When facts are found through internal audits that have the potential to seriously impact Air Water's management, there is a system for appropriately reporting them to the Audit & Supervisory Board and the representative director.

<Accounting Auditors>
With regard to accounting audits, Air Water has concluded an auditing agreement with KPMG AZSA LLC, and this firm carries out the audits.

Utilization of Independent Outside Directors

In order to ensure that the management supervisory function of the Board of Directors is highly effective, Air Water appoints two independent outside directors with the capability and experience to contribute to the company's sustained growth and help increase its corporate value over the medium-to-long term.

<Independence Judgment Criteria and Qualifications for Independent Outside Directors>
Air Water appoints as independent outside directors individuals who meet requirements and criteria stipulated in the Companies Act and by financial instrument exchanges and who meet the Judgment Criteria for the Independence of Outside Officers, which has been established by resolution of the Board of Directors. In addition, in selecting candidates for independent outside director positions, the company puts emphasis on a high level of expertise and extensive experience that make possible honest and constructive recommendations and opinions with respect to the company's management.

Details of the Judgment Criteria for the Independence of Outside Officers are provided in our Corporate Governance Report.

<Reasons for Appointment of Independent Outside Directors>

Yukiko Sakamoto (Director since June 2014)

Yukiko Sakamoto has held key positions in the Ministry of Health, Labour and Welfare and has also served as the deputy governor of Shizuoka Prefecture and as a member of the House of Councilors, and therefore has extensive experience and a high level of expertise. Air Water has appointed her as an outside director because she is able to leverage that experience and expertise to provide beneficial recommendations and opinions on Air Water's overall management. In addition, there are no circumstances giving rise to potential conflicts of interest with general shareholders as stipulated by the Tokyo Stock Exchange, and she meets the Judgment Criteria for the Independence of Outside Officers stipulated by the company. She has thus been designated an independent director.

Isamu Shimizu (Director since June 2018)

Isamu Shimizu has extensive experience and a high level of expertise as a university professor and instructor. Air Water has appointed him as an outside director because he is able to leverage that experience and expertise for Air Water's business management. In addition, there are no circumstances giving rise to potential conflicts of interest with general shareholders as stipulated by the Tokyo Stock Exchange, and he meets the Judgment Criteria for the Independence of Outside Officers stipulated by the Company. He has thus been designated an independent director.

Outside Audit & Supervisory Board member

Message

“Enhancement of corporate governance is a tool for growth” This notion is the key to a certain future.

Corporate governance is a tool for growth

Air Water has been working to enhance its corporate governance, which at present has almost reached the level appropriate for the scale and business characteristics of the company. Going forward, it is necessary to have a determination to grow through enhancing corporate governance. We outside directors must fulfill our primary role as the representative of general shareholders and commit ourselves to business management in their interest.

Atsushi Hayashi

Outside Audit & Supervisory Board Member
Air Water Inc.

Lawyer, former president of Takamatsu High Court. Served as a judge for about 40 years, dealing with many civil and criminal cases. After retirement, taught as a professor at the Kyoto University Graduate School of Law the basics of practical civil case procedures and other practical subjects. Appointed Outside Audit & Supervisory Board Member of Air Water Inc. in June 2016.

It is important not to overlook inconvenient facts

To this end, it is important to provide external views in regard to various biases that internal members may barely be aware of, and make efforts to correct them. At the same time, from my long experience as a judge, I am aware that corporate scandals often arise as a result of management overlooking inconvenient facts. I am therefore determined to face all facts, including those related to accounting, and will make every effort to implement this principle.

Knowing the risk of success leads to further development

In a M&A deal, for example, persons involved are always willing to know the risks. In cases where there is significant risk, such as when the value of goodwill is relatively large in comparison to that of tangible assets, it is important to point this out and hold constructive discussions on it. Since Air Water has been involved in many M&A deals, such pointing out of risks by outside directors is very useful, and the president pays heed to our opinions.

To properly point out risks, sufficient information on the circumstances of the company is necessary. And I can get such information through advance briefing on the subjects of Board of Directors meetings and other opportunities. I often wish to attend on-site inspections and hold interviews on the detailed situation of each division, which are valuable experiences. My next task is to implement measures to make more effective use of outside directors, such as systematic provision of information at the time of each outside director’s taking office and holding meetings between outside directors and the representative director on a regular basis.

Today, the environment surrounding corporate management is rapidly changing. What is necessary for Air Water, a company that has experienced many successes, is, as its management is aware, to develop a solid foundation of human resources and pursue future growth without being tied down by past successes. I expect the ongoing evolution of Air Water.

Enforcing Compliance

Compliance Structure Overview

As the foundation of its compliance framework, Air Water has established the Air Water Group Code of Ethical Conduct to increase awareness around ethics and cultivate a law-abiding spirit and to ensure compliance with all applicable laws and regulations. The Code provides all officers and employees of the company and its Group companies with guidelines to help them act in strict conformance with the laws and regulations and behave in an ethical manner.

Air Water has published the Compliance Handbook, which explains the contents of the Group Code of Ethical Conduct and cases of violation in an easy-to-understand manner, and distributes this handbook to all Group employees with the aim of raising their awareness.

In the organizational structure for compliance management, the Compliance Center has been set up as the supervising department under the direct control of the representative director, and is in charge of integrated management of compliance-related problems. The chief of the Compliance Center is appointed from among executive officers. Starting from January 2018, each company has a department responsible for compliance associated with organizational reform to expedite decision-making for ensuring compliance. The responsible department of each company seeks to closely cooperate with the Compliance Center, thereby enhancing the governability of the Group companies.

Compliance Committee

Air Water has established the Compliance Committee as a consultative body in which relevant divisions get together and discuss compliance issues. The Committee considers specific measures concerning the policies and instructions on compliance given by the representative director, and other issues, and also discusses ways to deal with compliance violations if they occur.

Internal Reporting System

Air Water has established an internal reporting system in order to ensure compliance in its business management. Anyone who becomes aware of violations of laws or internal rules, or any acts which may violate them, can make a report.

Points of contact for reporting have been established both inside and outside the company, and there is a provision ensuring that a person who makes a report will not suffer any disadvantage.

The points of contact, or hotline, for this internal reporting system are communicated to all Group employees by such means as the “compliance poster” displayed at all business sites.

Compliance poster

Reinforcing Risk Management

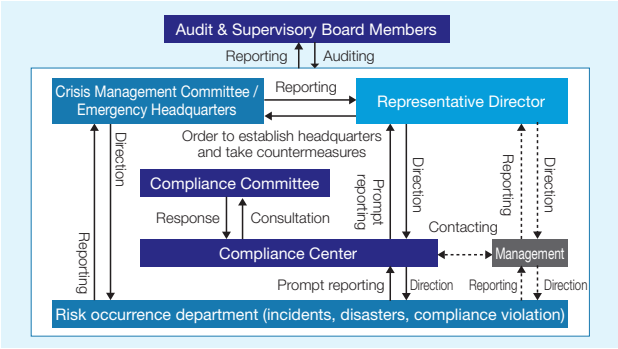
Risk Management Structure

The Compliance Center, which is under the direct control of the representative director, manages, as the supervisory division for the entire Group, the risks recognized as particularly important for business activities of the Air Water Group; namely, the risks concerning compliance, safety, disaster prevention, environmental preservation, and quality assurance.

Individual risks concerning information security, intellectual property, expansion of overseas businesses, business contracts, etc. are managed through actions at the level of each responsible division such as by formulating internal regulations, preparing manuals, and providing education and training, as well as through prior inspection and authorization procedures.

With the Compliance Center serving as the secretariat, the risk management examination meeting is held regularly, helping to bolster the risk management framework of the entire Group.

■ Crisis Management Framework



Information Security

Initiatives for Information Security

We at Air Water are fully aware that protecting the information of customers, etc. is an important social responsibility of any company. This means not only complying with laws and regulations related to specific personal information or personal information protection but also requiring all officers, employees, and other related parties engaged in corporate activities to ensure information security and protection of information in accordance with internal information security management regulations.

■ Major Information Security Measures

Category	Measures
Dissemination of rules	· Conducting training against targeted email attacks
Management of information devices	· Encryption of information devices · Periodic inventory counting using asset management tools
Illegal use prevention	· Password control and periodic changing of password · Controlling entry into/departure from data center · Banning connection of personal PC to company network, banning connection of personal media to company PC
Measures against external threats	· Complete separation of external network and intranet using firewall · Introduction of latest antivirus software · Web filtering and blocking unsolicited emails · Monitoring unauthorized communication with outside parties

Financial Data (10-Year)

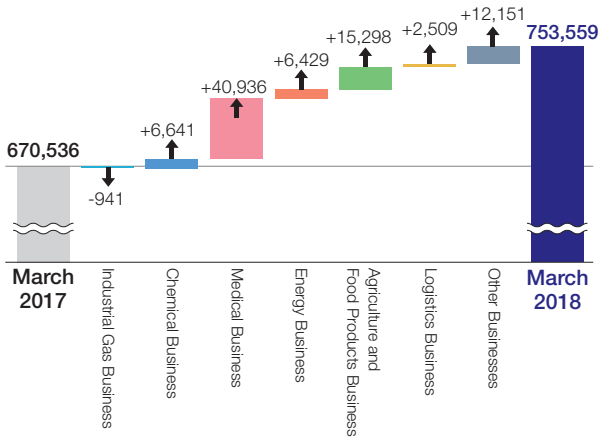
Air Water Inc. and its consolidated subsidiaries
A year ended March 31

Fiscal year	2009	2010	2011	2012	2013	2014	2015
Net sales	448,773	426,357	471,810	492,680	540,016	641,256	660,542
Operating income	25,779	28,202	31,269	31,672	27,897	35,078	36,127
Ordinary income	27,874	29,020	32,959	33,602	35,156	36,281	38,159
Profit attributable to owners of parent	12,681	13,916	11,680	17,167	18,366	19,225	20,703
Capital investment	35,494	25,357	33,820	22,843	34,111	32,349	32,028
Depreciation	14,296	17,045	19,424	20,373	22,059	24,338	25,222
Cash flows from operating activities	27,884	44,593	32,576	39,662	30,057	48,249	51,072
Cash flows from investing activities	(39,999)	(25,820)	(34,766)	(28,695)	(42,501)	(52,187)	(35,484)
Cash flows from financing activities	22,784	(20,615)	(1,592)	(7,612)	10,254	4,620	(7,941)
Free cash flow	(12,115)	18,773	(2,190)	10,967	(12,444)	(3,938)	15,588
Fiscal year end							
Total assets	385,563	392,759	407,639	430,547	484,329	528,092	547,643
Interest-bearing debt	135,070	114,786	122,318	119,385	141,296	155,479	154,864
Equity capital	132,327	153,141	157,637	170,449	185,599	203,500	226,375
Per-share data							
Earnings per share (EPS, yen)	68.56	73.64	61.24	89.35	94.04	98.29	105.75
Net assets (BPS, yen)	715.60	789.89	822.05	873.78	949.63	1,040.22	1,155.80
Dividend (DPS, yen)	22	22	22	22	24	26	28
Major indicators							
Recurring margin (%)	6.2	6.8	7.0	6.8	6.5	5.7	5.8
Return on asset (ROA, %)	7.5	7.5	8.2	8.0	7.7	7.2	7.1
Return on equity (ROE, %)	9.8	9.7	7.5	10.5	10.3	9.9	9.6
Equity capital ratio (%)	34.3	39.0	38.7	39.6	38.3	38.5	41.3
Net D/E ratio	0.86	0.60	0.66	0.57	0.65	0.66	0.58
Payout ratio (%)	32.1	29.9	35.9	24.6	25.5	26.5	26.5
Non-financial information							
Consolidated number of employees as of fiscal year-end (persons)	7,603	7,925	8,237	8,062	8,937	9,557	10,147
Number of consolidated subsidiaries	66	62	65	65	68	75	81

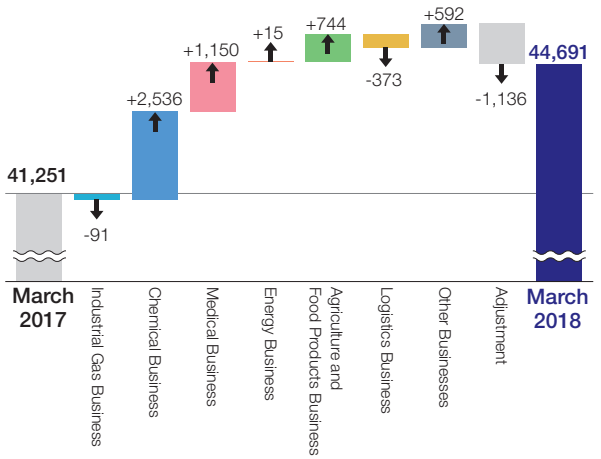
2016	2017	(Unit: million yen) 2018	USD 1,000* 2018	Increase/ decrease (%) 2018/2017
660,623	670,536	**753,559**	**7,092,987**	12.4
39,524	41,342	**42,398**	**399,078**	2.6
35,075	41,251	**44,691**	**420,661**	8.3
20,139	22,338	**25,173**	**236,945**	12.7
42,236	40,587	**61,309**	**577,080**	51.1
26,620	25,525	**27,120**	**255,271**	6.2
43,512	58,874	**47,765**	**449,595**	-18.9
(40,648)	(44,357)	**(61,637)**	**(580,168)**	39.0
(8,115)	(8,553)	**4,490**	**42,263**	-152.5
2,864	14,517	**(13,872)**	**(130,5703)**	-195.6
575,833	629,116	**694,914**	**6,540,983**	10.5
157,795	172,404	**203,183**	**1,912,491**	17.9
234,726	255,984	**277,955**	**2,616,293**	8.6
		Yen	USD	
102.73	114.53	**128.95**	**1.21**	12.6
1,196.92	1,312.55	**1,422.60**	**13.39**	8.4
28	34	**38**	**0.36**	11.8
5.3	6.2	**5.9**		
6.2	6.8	**6.8**		
8.7	9.1	**9.4**		
40.8	40.7	**40.0**		
0.57	0.55	**0.65**		
27.3	29.7	**29.5**		
11,334	12,580	**14,265**		
85	101	**111**		

* Converted according to the exchange rate as of March 31, 2018 of 106.24 yen to one US dollar.

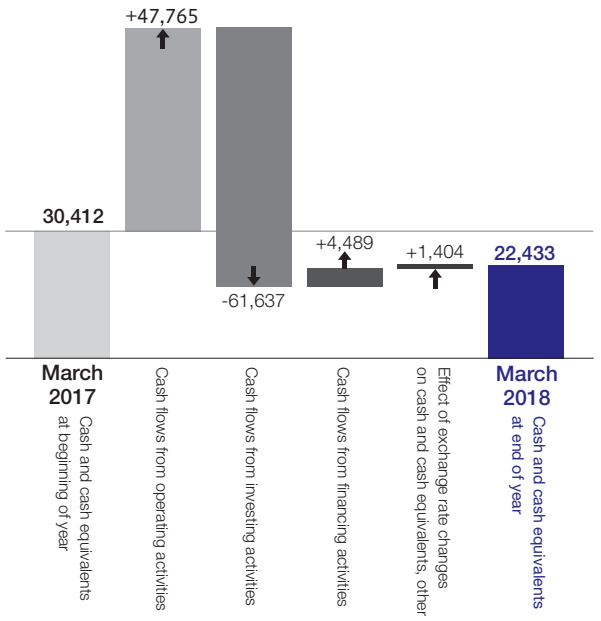
Net Sales Analysis (million yen)



Ordinary Income Analysis (million yen)



Cash Flow Analysis (million yen)



Timeline of “Value Creation” to Enrich Society

Air Water Inc. was established in 2000 through the consolidation of three companies—Hoxan Corporation, Daido Sanso Co., Ltd., and Kyodo Oxygen Co., Ltd.—each with different histories and cultures, to begin a new mission and purpose: to provide services that innovate industry and society through “air and water.”
Since then, the new company has conducted aggressive M&A activities to reinforce its business foundation, expand its business areas, and

1930 1940 1950 1960 1970 1980 1990 2000

Hoxan

1929
Hokkaido Sanso Co., Ltd. is established.
(Company renamed Hoxan Corporation in 1966)

Aiming to save lives and help develop local industries

In the years before the war, only one company was capable of supplying oxygen for medical use in central Hokkaido. Following the untimely death of a sick person due to poor transportation conditions and the inability to receive sufficient oxygen inhalation, the deceased’s elder brother, the then head of the Chamber of Commerce and Industry of Sapporo City, came up with a grand vision of supplying oxygen to save lives and develop Hokkaido’s industries, and founded Hokkaido Sanso Co., Ltd.

1929 (Medical / Industrial Gas)
Operation of 30 m³/h oxygen production machinery begins.

1955 (Energy)
Begins sales of LPG.

1963
Production and sales of Bath-All prefabricated bath units begins.

Hokkaido Sanso began sales of LPG for household use in an effort to improve the lifestyles of people who traditionally used wood and coal for cooking. Later, it developed Japan’s first prefabricated bathroom unit, the Hoxan Bath-All. At a time when the majority of Japanese people still used public bathhouses, the product captured the imagination: “The bath came to my home!”

1972
Propane gas-fueled Olympic torch lit at the Sapporo Winter Olympic Games.

1981 (Agriculture and Food)
Frozen foods business utilizing liquid nitrogen launched.

Daido Sanso

1933
Daido Sanso Co., Ltd. is established.

Founded in the spirit of a united front and collaboration

Oxygen and acetylene used for the welding and cutting of iron materials were preferentially distributed to the military-support industry, and difficult to obtain for smaller businesses. So it was decided to change the situation. Rather than purchasing oxygen, those who use it joined hands to produce it themselves. Established in Osaka, when the city was even livelier than Tokyo, Daido Sanso was recognized for its unconventional corporate stance.

1933 (Industrial Gas / Medical)
Operation of 60 m³/h oxygen production machinery begins.

1954
Operation of Sakai liquid oxygen production plant begins.

In order to respond to demand for the mass production and transportation of oxygen, the idea emerged of liquefying oxygen. Liquid oxygen can be reduced to 1/800 the volume of its gas form. Daido Sanso boldly decided to make the switch.

1970
On-site supply for chemical manufacturers begins.

1983
V1 high-purity nitrogen gas generator is developed.

The rapid growth of the electronics industry meant an increase in demand for high-purity nitrogen required for semiconductor production. Daido Sanso developed a unique plant system in which cryogenic nitrogen as a product is used for cooling air as a raw material.

1988 (Other)
Invests in Tateho Chemical Industries Co., Ltd.

Kyodo Oxygen

1962
Kyodo Oxygen Co., Ltd. is established.

Supporting Japan’s rapid economic growth with oxygen

Kyodo Oxygen was established in the midst of the Japanese economic miracle. Sumitomo Metal Industries established Kyodo Oxygen inside its Wakayama Ironworks to meet rapidly increasing steel demand fueled by the remarkable development of heavy industry, and the supply of oxygen for converter steelmaking began.

1962 (Industrial Gas)
Supply of gas to Kokura Ironworks begins.

1978
Production and sales of ELNACKS® welding argon begins.

1993 DAIDO Hoxan Inc. established

2000 Air Water Inc. established

1930 1940 1950 1960 1970 1980 1990 2000

improve the comprehensive strength of the Group.
Air Water will continue taking on businesses that are ahead of their time, in keeping with the spirit of its founder, which has been passed down in an unbroken line.

2001 2002 2003 2004 **2005** 2006 2007 2008 2009 **2010** 2011 2012 2013 2014 **2015** 2016 2017 2018 2019

Industrial Gas

- Acquires 100% of shares of Mitsui Chemicals Praxair.
  (Air Water Carbonic Inc. since 2005)
- Acquires hydrogen gas business.
  (Air Water Hydrogen Corp. since 2007)

- VSU, a small high-efficiency air separation plant, is developed and operation of No. 1 unit begins in Niigata.
- KOBELCO Air Water Cryoplant, Ltd. established.
- Acquires a stake in Elenbarrie Industrial Gases Limited (India).
- VSUA, capable of producing argon, goes into operation in Vietnam.

- Acquires Taylor-Wharton Malaysia as a Group company.

Medical

Medical services (SPD, sterilization) begin.

- Commences the bath system for nursing care business.

Expands the medical facility installation business.

- Acquires Kawaju Bosai Kogyo Co., Ltd. as a Group company.
  (Air Water Safety Service Inc. since 2006)

Hypodermic needle business launched.

- Acquires Saito Medical Industries Inc. as a Group company.
  (Misawa Medical Industry Co., Ltd. since 2018)

- The inhaled nitric oxide therapy business begins.

Enhances hospital facilities business.

- Acquires Miwa Electric Medical Co., Ltd. engaged in design and installation of operating rooms and ICUs as a Group company.

Enters into dental treatment field.

- Acquires Denken Co., Ltd. as a Group company.
  (Denken-Highdental Co., Ltd. since 2014)

Expands home medical care business.

- Air Water Medical Inc. is established.

Expands SPD business.

- Acquires Health Care Tech as a Group company.
  (Air Water Medi H Co., Ltd. since 2005)

Expands lifestyle medical field.

- Acquires Kawamoto Corporation, dealing with sanitary materials, as a Group company.
- Acquires a stake in Ci Medical Co., Ltd.
- Acquires GLOBALWIDE (Singapore) as a Group company.
  (Hospital interior and facility installation)

Energy

- Sales of LNG tank containers (40 feet) begin.
- Sales of VIVIDO, a hybrid water warming and heating system, begins.

Agriculture and Food

Ham and Sausage business begins.

- Acquires the Hokkaido Plant of Snow Brand Food and Saveur SS Inc. established.

- Air Water Farm, an agricultural production corporation, is established. Opens a glass greenhouse utilizing solar power in Chitose City.
- Acquires Sagami Ham as a Group company.

Expands agriculture businesses.

- Acquires Tomiichi Co., Ltd., a distributor and processor of fruit and vegetables, as a Group company.

Full-scale participation in beverages business.

- Acquires Gold Pack Co., Ltd., a contract manufacturer of beverages, as a Group company.
- Acquires Nichinoki Seiko Co., Ltd., manufacturer and seller of agricultural machinery, as a Group company.
- Acquires KYUSYUYA Co., Ltd., a nationwide fruit and vegetable retail chain, as a Group company.

- Acquires Daisen Ham Co., Ltd. as a Group company.

Full-scale participation in sweets business.

- Acquires Plecia Co., Ltd. as a Group company.

Chemical

- Coal Chemical Business begins.
  (Acquires a stake in Sumikin Chemicall)

Expands functional chemicals business.

- Acquires Kawasaki Kasei Chemicals Ltd. as a Group company.
- Transfers Coal Chemical Business (planned)

Other

Expands Aerosol business.

- Acquires Tokyo Aerosol Chemicals Co., Ltd. as a Group company.
  (Air Water Sol Inc. since 2003)
- Acquires a stake in Inoueki Co., Ltd., an electronic materials trading company.
  (Air Water Materials Inc. since 2015)
- Acquires Aquaintec Corporation, engaged in design and installation of water treatment facilities, as a Group company.
- Woody biomass power generation begins at Nihonkaisui Ako Power Plant.
- Production and sales of artificial recycled wood (ECOROCA®) begin.
- Acquires the Bellpearl® functional phenolic resin business. Air Water Bellpearl Inc. established.

Salt business begins.

- Acquires Nihonkaisui Co., Ltd. as a Group company, establishing seawater business along with Tateho Chemical Industries Co., Ltd.

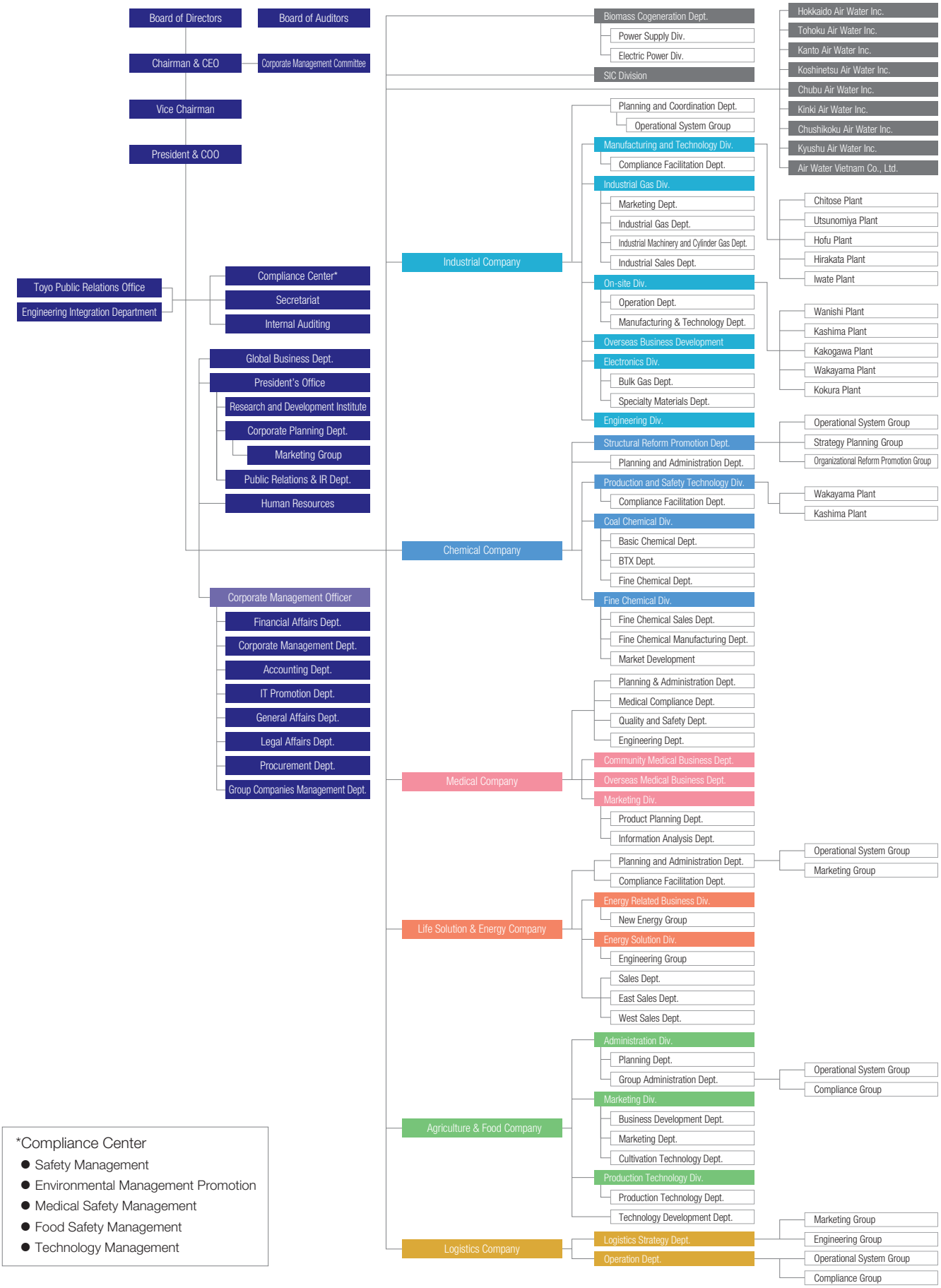
2001 2002 2003 2004 **2005** 2006 2007 2008 2009 **2010** 2011 2012 2013 2014 **2015** 2016 2017 2018 2019

Major Group Companies (As of October 1, 2018)

Name	Address	Business Activities
Regional Business Companies		
Hokkaido Air Water Inc.	2, Kita-Sanjo-Nishi 1-chome, Chuo-ku, Sapporo, 060-0003, Japan	Sale of industrial gas and medical gas, LP gas and kerosene, natural gas, and related equipment
Tohoku Air Water Inc.	4-22, Tsutsujigaoka 2-chome, Miyagino-ku, Sendai, 983-0852, Japan	Sale of industrial gas and medical gas, LP gas and kerosene, natural gas, and related equipment
Kanto Air Water Inc.	18-19, Toranomon 3-chome, Minato-ku, Tokyo, 105-0001, Japan	Sale of industrial gas and medical gas, LP gas and kerosene, natural gas, and related equipment
Koshinetsu Air Water Inc.	3878-1, Azusagawayamato, Matsumoto, Nagano Prefecture, 390-1701, Japan	Sale of industrial gas and medical gas, and related equipment
Chubu Air Water Inc.	132, Oneyama 2-chome, Midori-ku, Nagoya, 459-8007, Japan	Sale of industrial gas and medical gas, LP gas and kerosene, and related equipment
Kinki Air Water Inc.	12-8, Minami-Semba 2-chome, Chuo-ku, Osaka, 542-0081, Japan	Sale of industrial gas and medical gas, LP gas and kerosene, natural gas and related equipment
Chushikoku Air Water Inc.	3-53, Danbaraminami 1-chome, Minami-ku, Hiroshima, 732-0814, Japan	Sale of industrial gas and medical gas, and related equipment
Kyushu Air Water Inc.	13-34, Hakataekihigashi 2-chome, Hakata-ku, Fukuoka, 812-0013, Japan	Sale of industrial gas and medical gas, and related equipment
Industrial Gas Business *Industrial gas includes medical gas in some cases.		
Tomakomai Kyodo Oxygen Co., Ltd.	17-18, Yayoicho 1-chome, Tomakomai, Hokkaido, 053-0802, Japan	Manufacture and sale of industrial gas
Kyodo Oxygen Co., Ltd.	1-7, Motowanishicho 1-chome, Muroran, Hokkaido, 050-0065, Japan	Manufacture and sale of liquid nitrogen gas and dry ice
NSCC Air Water, Inc.	14-1, Sotokanda 4-chome, Chiyoda-ku, Tokyo, 101-0021, Japan	Manufacture and sale of industrial gas (including onsite supply)
Air Water Carbonic Inc.	21-3, Shinbashi 4-chome, Minato-ku, Tokyo, 105-0004, Japan	Manufacture and sale of liquid nitrogen gas and dry ice
Air Water Hydrogen Corp.	18-19, Toranomon 3-chome, Minato-ku, Tokyo, 105-0001, Japan	Manufacture, sale, recycling, etc. of industrial hydrogen gas
Nippon Helium Inc.	10-1, Shiohama 3-chome, Kawasaki-Ku, Kawasaki, Kanagawa Prefecture, 210-0826 Japan	Import and sale of helium
Takenaka Kouatsu, Co., Ltd.	8, Motoshiocho 5-chome, Minami-ku, Nagoya, 457-0823, Japan	Sale of industrial gas
Shinko Air Water Gas, Ltd.	12-8, Minami-Semba 2-chome, Chuo-ku, Osaka, 542-0081, Japan	Sale of industrial gas
Air Water Plant & Engineering, Inc.	6-40, Chikkoshinmachi 2-chome, Nishi-ku, Sakai, Osaka Prefecture, 592-8331, Japan	Design, production, sale and maintenance of various types of gas generation units and gas applications, and LNG-related equipment
Kurio Air, Inc.	4, Chikkohamaderacho, Nishi-ku, Sakai, Osaka Prefecture 592-8351, Japan	Manufacture and sale of industrial gas
Gas Net Inc.	5-9, Kawaramachi 4-chome, Chuo-ku, Osaka, 541-0048, Japan	Sale of gas and gas welding materials
Sakai Gas Center, Inc.	1, Takumicho, Sakai-ku, Sakai, Osaka Prefecture, 590-0908, Japan	Manufacture and sale of industrial gas
Air Water Manufacturing, Inc.	6-40, Chikkoshinmachi 2-chome, Nishi-ku, Sakai, Osaka Prefecture, 592-8331, Japan	Production of industrial gas facilitates and equipment, etc.
Senboku Oxygen, Co., Ltd .	5, Takasago 1-chome, Takaishi, Osaka Prefecture, 592-0001, Japan	Manufacture and sale of industrial gas (including onsite supply)
Air Water Daio Inc.	7-27, Jinaicho 2-chome, Moriguchi, Osaka Prefecture, 570-0056, Japan	Manufacture and sale of gas for electronics industry
Shinko AirTech, Ltd.	3-16, Haradadori 2-chome, Nada-ku, Kobe, 657-0845, Japan	Manufacture and sale of industrial gas (including onsite supply), and sale of nitrogen gas generating units
KOBELCO Air Water Cryoplant, Ltd.	2-7, Iwaya Nakamachi 4-chome, Nada-ku, Kobe, 657-0845, Japan	Design, production and maintenance of deep cold air separating units
Matsuyama Oxygen Inc.	2877, Nishihabumachi, Matsuyama, 791-8044, Japan	Manufacture and sale of industrial gas and LP gas
Japan Pionics Co., Ltd.	3-32, Tamura 3-chome, Hiratsuka, Kanagawa Prefecture, 254-0013, Japan	Manufacture and sale of various gas purifiers, waste gas treatment equipment, etc.
Chemical Business		
Sun Chemical Co., Ltd.	29-3 Shinmachi, Oaza, Yashio, Saitama Prefecture, 340-0807, Japan	Manufacture and sale of functional chemicals (pharmaceutical intermediates and electronic materials)
Kawasaki Kasei Chemicals Ltd.	1310, Omiyacho, Saiwai-ku, Kawasaki, Kanagawa Prefecture, 212-0014, Japan	Manufacture and sale of organic acid products, organic acid derivatives, and quinone-based products
Printec Corporation	1866-3, Sakai, Atsugi, Kanagawa Prefecture, 243-0022, Japan	Manufacture and sale of electronic materials and semiconductor substrates
Medical Business		
Ikiken Co., Ltd.	12-27, Shinsayama 2-chome, Sayama, Saitama Prefecture, 350-1331, Japan	Manufacture and maintenance of medical oxygen concentrators
Air Water Medi H, Co., Ltd.	12-3, Nishi-Gotanda 2-chome, Shinagawa-ku, Tokyo, 141-0031 Japan	Contract sterilization of medical equipment and materials, and SPD solutions and services for medical institutions
Air Water Medical Inc.	12-3, Nishi-Gotanda 2-chome, Shinagawa-ku, Tokyo, 141-0031 Japan	Sale and rental of medical equipment, and maintenance services for medical equipment
MC Service Co., Ltd.	3171-5, Ojima, Oaza, Chikuma, Nagano Prefecture, 387-0013, Japan	Maintenance services for hospital facilities and medical equipment, and contract sterilization services
Miwa Electric Medical Co., Ltd.	25, Gonaka Hanamasa, Ama, Aichi Prefecture, 490-1205, Japan	Construction of operating room and ICU interiors, and manufacture and sale of medical facilities and equipment
Handa Co., Ltd.	11-29, Ekinishihonmachi 2-chome, Kanazawa, Ishikawa Prefecture, 920-0025, Japan	Sale and maintenance of medical equipment and medical materials, and SPD services
Nishimura Kikai Co., Ltd.	330, Sashimonocho, Kawaramachidori-Ebisugawaagaru, Nakagyo-Ku, Kyoto, Kyoto, 604-0903, Japan	Sale and maintenance of circulatory system medical equipment, dialysis systems and equipment, and surgical instruments
Denken-Highdental Co., Ltd.	130, Oyakeishigoricho, Yamashina-ku, Kyoto, Kyoto, 607-8187, Japan	Design, production and sale of dental and medical equipment, laboratory equipment and equipment of electronic applications, and manufacture and sale of dental materials
Air Water Safety Service Inc.	2-16, Takatsukadai 3-chome, Nishi-ku, Kobe, Hyogo Prefecture, 651-2271, Japan	Installation of medical gas pipes, and design, manufacture and sale of ventilators, fire extinguishing units, etc.
Misawa Medical Industry Co., Ltd.	351, Asahimachi, Kasama, Ibaraki Prefecture, 309-1717, Japan	Manufacture and sale of hypodermic needles and other medical equipment
Orion Radsafe Medical Co., Ltd.	8-24, Sakae 5-chome, Naka-ku, Nagoya, Aichi Prefecture 460-0008, Japan	Wholesale, manufacture and sale of radiation-related medical equipment
Kawamoto Corporation	6-4, Tanimachi 2-chome, Chuo-ku, Osaka, Osaka, 540-0012, Japan	Manufacture and sale of sanitary materials, medical supplies, etc.
Matsuoka Meditech Corp.	22-3, Hongo 2-chome, Bunkyo-ku, Tokyo, 113-0033, Japan	Manufacture and sale of medical hypodermic needles
Ci Medical Co., Ltd.	6, Asahigaoka 2-chome, Hakusan, Ishikawa Prefecture, 924-0004, Japan	Mail-order sale and wholesale of dental and medical supplies
Kairos Co., Ltd.	13-4, Shiba 2-chome, Minato-ku, Tokyo, 105-0014, Japan	Development, manufacture and sale of 8K rigid endoscope cameras and systems designed for medical use

Name	Address	Business Activities
Agriculture and Food Products Business		
Air Water Farm Agricultural Production Corporation	2, Kita-Sanjo-Nishi 1-chome, Chuo-ku, Sapporo, Hokkaido, 060-0003, Japan	Production and sale of fruit and vegetables
Saveur SS Inc.	3-17, Kikusui 5 Jo 2-chome, Shiroishi-ku, Sapporo, Hokkaido, 003-0805, Japan	Manufacture and sale of processed meat products (ham and delicatessen), ingredient-type frozen foods, cooking sauces and sweets
Tomiichi Co., Ltd.	13-5, Nagayama Kita 1 Jo 10-chome, Asahikawa, Hokkaido, 079-8451, Japan	Wholesale and processing of fruit and vegetables for processing, and sale of frozen foods, etc.
Nichinoki Seiko Co., Ltd.	13, Konan 1-chome, Ashoro, Ashoro-gun, Hokkaido, 089-3727, Japan	Manufacture and sale of agricultural machinery
Air Water Tokachi Foods Co., Ltd.	194-5, Sarabetsu, Sarabetsumura, Aza, Kasai-gun, Hokkaido, 089-1542, Japan	Manufacture and sale of frozen foods and canned and retort pouch food products
Gold-Pak Co., Ltd.	13-14, Higashishinagawa 4-chome, Shinagawa-ku, Tokyo, 140-0002, Japan	Manufacture and sale of fruit and vegetable juices and other beverages including some soft drinks
KYUSYUYA Co., Ltd.	24-1 Koshino, Hachioji, Tokyo, 192-0361, Japan	Operation of fruit and vegetable retailing stores in department stores, station buildings and shopping centers, and operation of supermarkets
Sagami Ham Co., Ltd.	1158-1, Kawamukocho, Tsuzuki-ku, Yokohama, Kanagawa Prefecture, 224-0044, Japan	Sale of processed meat products and meat and prepared dishes
Daisen Ham Co., Ltd.	3018, Yomicho, Yonago, Tottori Prefecture, 683-0851, Japan	Manufacture and sale of ham, bacon, sausage and other processed foods
Plecia Co., Ltd.	32-1, Tomuro 5-chome, Atsugi, Kanagawa Prefecture, 243-0031, Japan	Manufacture and sale of Japanese confectionary and Western confectionary
AW Water, Inc.	3500-1, Omachi, Omachi, Nagano Prefecture, 398-0002, Japan	Manufacture and sale of drinking water, etc.
Q & C Co., Ltd.	6-7, Kita 26 Jo Higashi 22-chome, Higashi-ku, Sapporo, Hokkaido, 065-0026, Japan	Consultation on obtaining various certifications related to food safety, provision of hygiene management education and microorganism tests, and wholesale trading of materials associated with such activities
Logistics Business		
Air Water Logistics Co., Ltd.	1-6, Tsukisamu Higashi 2 Jo 16-chome, Toyohira-ku, Sapporo, Hokkaido, 062-0052, Japan	High pressure gas logistics, general cargo logistics, food logistics, medical and environment logistics, and distribution and processing services
Hokkaido Shatai Co., Ltd.	7-3 Omagarikogyodanchi 2-chome, Kitahiroshima, Hokkaido, 061-1274, Japan	Design and production, sale and repair of various types of truck bodies, and vehicle inspection and maintenances for various types of vehicle
Air Water Food Logistics Co., Ltd.	9-8, Ogimachi 5-chome, Miyagino-ku, Sendai, Miyagi Prefecture, 983-0034, Japan	Food low-temperature logistics, warehouse storage and warehouse operations under contract
East Japan Air Water Logistics Co., Ltd.	11-5, Shin-Yokohama 2-chome, Kouhoku-ku, Yokohama, Kanagawa Prefecture, 222-0033 Japan	High pressure gas logistics, general cargo logistics, food logistics, medical and environmental logistics, and distribution and processing services
West Japan Air Water Logistics Co., Ltd.	13-22, Nishinakajima 4-chome, Yodogawa-ku, Osaka, Osaka, 532-0011, Japan	High pressure gas logistics, general cargo logistics, food logistics, medical and environmental logistics, and distribution and processing services
Other Businesses		
Hokkaido Air Water Engineering, Inc.	2-16, Kitaokadama 3 Jo 3-chome, Higashi-ku, Sapporo, Hokkaido, 007-0883, Japan	Installation, inspection and maintenance of generating units, storage tanks and pipes for various types of gas
Summit Onahama S Power Corporation	2-4, Nagisa, Onahama, Aza, Iwaki, Fukushima Prefecture, 971-8101, Japan	Manufacture and sale of electric power and steam
Celco Inc.	1416-4, Kume, Oaza, Tokorozawa, Saitama Prefecture, 359-1131, Japan	Sale of electronic equipment and components, and development and proposal of circuit units
Air Water Sol Inc.	47-1, Kanda Higashimatsushitacho, Chiyoda-ku, Tokyo, 101-0042, Japan	OEM supply of aerosol products, and manufacture and sales of its own branded products
Nihonkaisui Co., Ltd.	2-5, Kanda Surugadai 4-chome, Chiyoda-ku, Tokyo, 101-0062, Japan	Manufacture and sale of salt and byproducts, environmental business and electric power business
Japan Salt Corporation	1-1, Kyobashi 1-chome, Chuo-ku, Tokyo, 104-0031, Japan	Purchase and sale of salt and chemicals
K&O Energy Group Inc.	661, Mobara, Mobara, Chiba Prefecture, 297-0026, Japan	Business management of subsidiaries which are engaged in the gas business, iodine business, etc.
Panasonic Eco Solutions AWE Co., Ltd.	10-27, Higashishinagawa 4-chome, Shinagawa, Tokyo, 140-0002, Japan	Sale and installation of bath modules and construction materials
Aquaintec Corporation	1162-1, Dategata, Kakegawa, Shizuoka Prefecture, 436-0005, Japan	Pipe renewal business, manufacturing of water treatment machinery, and sale of environmental equipment and materials
Air Water ECOROCA Inc.	3440-9 Wakahohoshina, Nagano, Nagano Prefecture, 381-0102, Japan	Manufacture and sale of wood-plastic composite recycled construction materials
Air Water Mach Inc.	4009-1, Azusagawayamato, Matsumoto, Nagano Prefecture, 390-1701, Japan	Manufacture and sale of industrial rubber products and resin products
Air Water Chemistry Inc.	325, Kitajima, Wakayama, Wakayama Prefecture, 640-8403, Japan	Disposal of liquid waste, and oil and gas wastes from plants, and analysis services
Air Water Softech Inc.	12-8, Minami-Semba 2-chome, Chuo-ku, Osaka, Osaka, 542-0081, Japan	Development and sale of computer systems
Air Water Bellpearl Inc.	12-8, Minami-Semba 2-chome, Chuo-ku, Osaka, Osaka, 542-0081, Japan	Manufacture and sale of the functional resin Bellpearl, various types of processed goods, and nitrogen gas generating units
Air Water NV Inc.	1-8, Nakahamacho, Amagasaki, Hyogo Prefecture, 660-0091, Japan	Metal surface hardening treatment services using NV nitriding process
Tateho Chemical Industries Co., Ltd.	974, Kato, Aza, Kariya, Ako, Hyogo Prtefecture, 678-0239, Japan	Manufacture and sale of magnesium oxide, fused magnesia, magnesium hydroxide, and ceramic products
Air Water Materials Inc.	13-7, Hamamatsucho 2-chome, Minato-ku, Tokyo, 105-0013, Japan	Sale and export/import of semiconductor manufacturing chemicals, chemical industry chemicals, synthetics resins, and electric and electronic materials
Overseas		
Air Water Mach Rubber Products (Fujian) Co., Ltd.	Honglu Rongqiao Economic and Technological Development Zone, Fuqing, Fujian Province, China	Manufacture and sale of rubber molded products
Air Water Richap (Jiangsu) Chemical Co., Ltd.	Yingbin Road., Duigougang Chemical Industrial Park, Guannan, Lianyungang, Jiangsu Province, China	Manufacture of electronic materials and pharmaceutical and agrochemical intermediates, etc.
Tateho Chemical Dalian Co., Ltd.	No. 41 North-East 2nd St., Dalian Economic & Technological Development Zone, Dalian, Liaoning, China	Manufacture and sale of electrical grade magnesia
TAYLOR-WHARTON MALAYSIA SDN.BHD.	Lot Nos. PT 5073, 5076 & 5077 Jalan Jangur 28/43 Hicom Industrial Estate 40400 Shah Alam Selangor, Malaysia	Manufacture and sale of low temperature liquefied gas storage tanks, small bulk containers, LGC containers, etc.
ELLENBARRIE INDUSTRIAL GASES LTD.	3A Ripon Street, Kolkata - 700 016, INDIA	Manufacture and sale of industrial and medical gases
TATEHO OZARK TECHNICAL CERAMICS, INC.	402 Ware Street, Webb, Missouri, USA	Manufacture of ceramics
GLOBALWIDE INTERNATIONAL PTE.LTD. GLOBALWIDE M&E PTE.LTD.	84 Kaki Bukit Industrial Terrace Singapore	Design and construction of interiors and facilities of hospitals, etc.
POWER PARTNERS PTE.LTD.	Block 3, Ang Mo Kio Industrial Park 2A, #02-06, AMK Tech I, Singapore	Engineering and maintenance of uninterruptible power supplies
TOMCO2 SYSTEMS COMPANY.	3340 Rosebud Road, Loganville, GA, USA	Manufacture and sale of carbon dioxide related products and equipment

Organizational Chart (As of October 1, 2018)



Corporate Profile / Stock Information

Corporate Information

(As of March 31, 2018)

Company name	AIR WATER INC.
Head Office	12-8, Minami-Semba 2-chome, Chuo-ku, Osaka, 542-0081, Japan Tel: (+81) 6-6252-5411 Fax: (+81) 6-6252-3965
Registered Address of Head Office	2, Kita-Sanjo-Nishi 1-chome, Chuo-ku, Sapporo, 060-0003, Japan
Tokyo Office	18-19, Toranomon 3-chome, Minato-ku, Tokyo, 105-0001, Japan
Established	September 24, 1929
Paid-in Capital	¥32,263 million
Number of Employees	14,265 (Consolidated)
URL	http://www.awi.co.jp/english/

Board of Directors

(As of October 1, 2018)

Chairman of the Board	Masahiro Toyoda	Chief Executive Officer
Vice Chairman	Yasuo Imai	Assistant Chairman Chairman of General Incorporated Association Japan Industrial and Medical Gases Association
Vice Chairman	Kikuo Toyoda	Assistant Chairman (responsible for overall business operations and in charge of human resources)
President	Kiyoshi Shirai	Chief Operating Officer
Vice President	Yuu Karato	President, Chemical Company
Vice President	Yukio Matsubara	President, Industrial Company
Vice President	Masato Machida	President, Agriculture & Food Company
Senior Managing Director	Hideo Tsutsumi	General Manager, Overseas Business Strategy (in charge of NV and ECOROCA business operations)
Senior Managing Director	Yukio Murakami	President, Medical Company
Managing Director	Minoru Nagata	Chief Representative for Kanto Operations General Manager, Kanto Branch President, Kanto Air Water Inc.
Managing Director	Yasushi Sogabe	Chief Representative for Hokkaido Operations General Manager, Hokkaido Branch President, Hokkaido Air Water Inc.
Managing Director	Hirokazu Kawata	President, Logistics Company
Managing Director	Yoshio Shiomi	Chief Representative for Kinki Operations General Manager, Kinki Branch President, Kinki Air Water Inc.
Managing Director	Katsumi Kajiwara	President, Life Solution & Energy Company
Managing Director	Atsushi Iinaga	Corporate Management Officer
Managing Director	Kosuke Komura	Chief Representative for Koshinetsu Operations General Manager, Koshinetsu Branch President, Koshinetsu Air Water Inc.
Corporate Director	Akihiro Toyonaga	General Manager, Accounting
Corporate Director	Ryosuke Matsubayashi	Director, Engineering Integration Department President, Air Water America Inc.
Corporate Director	Yukiko Sakamoto	Independent Director
Corporate Director	Isamu Shimizu	Independent Director
Auditor	Hirohisa Hiramatsu	
Auditor	Kouichi Nakagawa	Outside Corporate Auditor (Regular)
Auditor	Hiromi Yanagisawa	
Auditor	Akihiko Takashima	Outside Corporate Auditor (Part-time)
Auditor	Atsushi Hayashi	Outside Corporate Auditor (Part-time)

Principal Shareholders

(As of March 31, 2018)

Company	Number of shares held (thousands)	Ratio of shares held (%)
The Master Trust Bank of Japan, Ltd. (trust account)	10,584	5.39
Nippon Steel & Sumitomo Metal Corporation	10,000	5.09
Japan Trustee Services Bank, Ltd. (trust account)	8,993	4.58
Sumitomo Mitsui Trust Bank, Limited	7,936	4.04
Sumitomo Mitsui Banking Corporation	6,196	3.16
GOLDMAN, SACHS & CO. REG	5,593	2.85
Air Water Customers' Stockholding	5,557	2.83
The Hokkaido Bank., Ltd.	4,113	2.10
National Mutual Insurance Federation of Agricultural Cooperatives	3,879	1.98
North Pacific Bank, Ltd.	3,874	1.97

Information on Shares

Fiscal Year	From April 1 to March 31
Annual General Meeting of Shareholders	Held in June every year
Record Dates	Annual meeting of shareholders: March 31 Year-end dividend: March 31 Interim dividend: September 30
Total Number of Issued Shares	198,705,057 shares
Number of Shares per Unit	100 shares
Manager of the Register of Shareholders	Sumitomo Mitsui Trust Bank, Limited 4-1, Marunouchi 1-chome, Chiyoda-ku, Tokyo, Japan
Telephone Number for Inquiries	TEL: 0120-782-031 (toll-free in Japan)
URL	http://www.smtb.jp/personal/agency/index.html
Method of Public Notice	Electronic public notice [URL of Air Water Inc. on which public notice will be posted] http://www.awi.co.jp/ir/koukoku.html
Listed Financial Instruments Exchange	Tokyo, Sapporo
Securities Code	4088

AIR WATER INC.

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