

# Environment

Environmental  
Management

Environmental  
Compliance

Climate Change /  
Energy

Water Resources

Preserving Biodiversity

Preventing  
Environmental  
Pollution

Resources Recycling

## Boundary of Global Environmental Protection

While the boundary of global environmental protection extends to the entire Anritsu Group, in principle the reporting boundary for numerical data, such as environmental impact, encompasses Anritsu Corp. and the following Group companies.

|                                  |                           |                            |                                    |
|----------------------------------|---------------------------|----------------------------|------------------------------------|
| Group Companies<br>in Japan      | Anritsu Infivis Co., Ltd. | Tohoku Anritsu Co., Ltd.   | Anritsu Customer Support Co., Ltd. |
|                                  | Anritsu Devices Co., Ltd. | Anritsu Networks Co., Ltd. | Anritsu Engineering Co., Ltd.      |
|                                  | Anritsu Kousan Co., Ltd.  | AT Techmac Co., Ltd.       | Anritsu Pro Associe Co., Ltd.      |
| Group Companies<br>Outside Japan | Anritsu Company (U.S.A.)  | Anritsu Ltd. (UK)          |                                    |

\*Within the Anritsu Group, the Hiratsuka site refers to the facilities of AT Techmac Co., Ltd. in Hiratsuka City, Kanagawa Prefecture; the Tohoku site refers to those of Tohoku Anritsu Co., Ltd. in Koriyama City, Fukushima Prefecture; and the Atsugi site refers to those of other Group companies in Atsugi City, Kanagawa Prefecture, and the domestic sales offices.

## Environmental Management

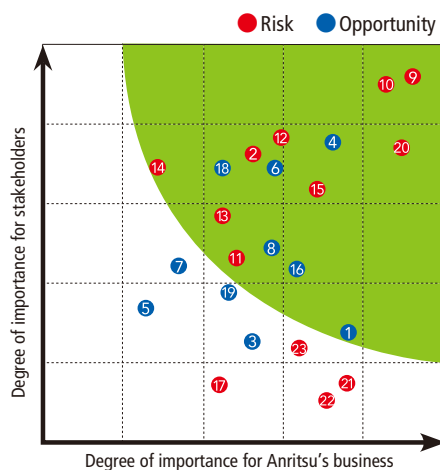
### Social issues as a background

Recently, our investors and other stakeholders have shown greater interest in ESG (Environmental, Social, Governance) and SDGs (Sustainable Development Goals). Moreover, we have entered an age in which there is a balance between protecting the global environment, soundly developing society, and developing the economy, whereby the active participation of companies in this development process is now required.

In order to contribute to the sustainability of society and realize beneficial sustainable growth, Anritsu has been working to firmly instill environmental compliance related to our business activities and products, address climate change, create a recycling-oriented society, and prevent environmental pollution. In addition, we believe that administering an environmental management system that contributes to business and disclosing information in a manner that is easy for all of our stakeholders to understand in lock-step with business are also key challenges.

Anritsu is working to identify materiality within environmental management and introduce materiality to the challenges of the GLP2020 Environmental Initiative, the new three-year mid-term environment-related business plan launched in fiscal 2018.











#### Environmental Management Materiality



No. Challenge (items in bold are of high importance)

- |                                                                                           |                                                                         |
|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| <b>1 Integrate EMS into business processes</b>                                            | <b>12 Formulate SBT</b>                                                 |
| <b>2 Incorporate SDGs into environmental management</b>                                   | <b>13 Address carbon pricing</b>                                        |
| 3 Create an environmental business                                                        | <b>14 Address biodiversity</b>                                          |
| <b>4 Disclose ESG information</b>                                                         | <b>15 Mitigate climate change (energy-saving factories and offices)</b> |
| 5 Collaborate with environment-related NGOs and NPOs                                      | <b>16 Adopt renewable energy</b>                                        |
| <b>6 Mitigate climate change (energy-saving products)</b>                                 | <b>17 Adapt to climate change (factories and offices)</b>               |
| 7 Adapt to climate change (products, solutions)                                           | <b>18 Effectively use water</b>                                         |
| <b>8 Develop resource-saving products</b>                                                 | <b>19 Promote the 3Rs (reduce waste, zero emissions, etc.)</b>          |
| <b>9 Compliance (for products)</b>                                                        | <b>20 Compliance (for factories and offices)</b>                        |
| <b>10 Manage chemical substances in products</b>                                          | 21 Collect environmental impact data                                    |
| <b>11 Manage suppliers (chemical substances in products, CO<sub>2</sub>, water, etc.)</b> | 22 Collect chemical substance data                                      |
|                                                                                           | 23 Develop an Eco-mind                                                  |

#### GLP2020 Environmental Initiative

| Priority Themes                                                                                               | Biodiversity Conservation                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                   |  |                                                                     |  |
|---------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------|--|
|                                                                                                               | <div><div></div><div></div></div>                                                                                     |                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                   |  |                                                                     |  |
|                                                                                                               | Climate change measures                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                | Resource recycling                                                                                                                                                                                |  | Pollution prevention                                                |  |
|                                                                                                               | <div></div> <div></div> <div></div> | <div></div> <div></div> <div></div> | <div></div> <div></div> |  |                                                                     |  |
| Eco-Management                                                                                                | Make improvements through the integration of business processes with the management system<br>[Theme 1]                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                   |  |                                                                     |  |
| Eco-Communication                                                                                             | Improve the quality of information disclosure to elevate the environmental brand<br>[Theme 2]                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                   |  |                                                                     |  |
| Eco-Products                                                                                                  | Strengthen energy-saving and resource-saving products<br>[Theme 3]                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                   |  | Provide products that do not contain hazardous substances [Theme 4] |  |
| Eco-Office, Eco-Factory                                                                                       | Reduce CO <sub>2</sub> emissions<br>[Theme 5]                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                | Effectively use water and firmly instill the 3Rs                                                                                                                                                  |  | Reduce chemical substances and prevent risks                        |  |
| Eco-Mind                                                                                                      | Cultivate an Eco-Mind                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                   |  |                                                                     |  |
| Building an environmental brand by pursuing global environmental management throughout the entire value chain |                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                   |  |                                                                     |  |

## Policy

Anritsu's "Environmental Policy" are set forth its "Environmental Principles" and "Action Guidelines."

\*The "Action Guidelines" apply only to the Domestic Anritsu Group

### Environmental Policy

#### ◆ Environmental Principles

Anritsu strives to give due consideration to the environment in both the development and manufacture of our products. Through sincerity, harmony, and enthusiasm, we will endeavor to foster a prosperous society at one with nature.

#### ◆ Action Guidelines

We create "Eco-Offices", "Eco-Factories", and "Eco-Products" based on the "Eco-management" of our company and the "Eco-Mind" of every one of us.

- (1) Over the whole life cycle of a product, from design and development, to procurement, manufacturing, marketing, distribution, and usage by customers, through disposal, we conduct environmentally conscious business activities.
- (2) We have set up an organizational and operational structure to perform environmental management activities, and have established and maintain an environmental management system that we continuously improve.
- (3) We comply with legal and regulatory controls and make every effort to continuously improve the environmental performance to meet the requirements from stakeholders.
- (4) In order to contribute to the prevention of global warming and conservation of biological diversity, we promote energy saving, the 3Rs (reduce, reuse, and recycle), and environmental pollution risk reduction in all of our offices and factories.
- (5) We provide Eco-Products by saving energy, saving resources, and reducing hazardous substances.
- (6) We cultivate Eco-Minds by providing appropriate environmental education and training.

In addition, Anritsu has stated its intent to "contribute to the preservation of the global environment by promoting environmental management for the coexistence of people and nature" in our Sustainability Policy (p. 8)

## Structure

Anritsu has established a deliberating body with the executive officer of environmental management (Anritsu Corporation, Chief Environmental Officer) as chairperson to promote environmental management.

| Deliberating Body                               | Deliberating Body Objectives                                                                                                                        | Group Members                                                                                                                                                                                                             |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Global Environmental Management Meetings</b> | Address challenges that Anritsu must tackle as a single global entity                                                                               | Responsible officers from the three major locations of Japan, the United States, and the United Kingdom                                                                                                                   |
| <b>Environment Management Committee</b>         | Promote the environmental management system of the Domestic Anritsu Group                                                                           | Officers responsible for the environment at each division* of the Domestic Anritsu Group, and the officers responsible for the Internal Control Department, Legal Affairs Department, and Sustainability Promotion Center |
| <b>Promotion of RoHS Group Meeting</b>          | Promote the development and production of products that do not contain hazardous substances such as those banned under the RoHS directive of Europe | Representatives from the Development Department, SCM Department, IT Department, and Environment Department                                                                                                                |

\*Environmental management activity unit

### ISO 14001 Certification Acquisition Status

The Anritsu Group has constructed an environmental management system and has acquired ISO 14001:2015 certification for our core development and manufacturing bases of Japan and the United States.

The coverage rate of the environmental management system is 70% when based on the number of Anritsu Group employees.

#### Anritsu Corporation (Head Office)

[Certification Date] August 1998 [Update] February 2016  
[Certification Organization/Number] Japan Quality Assurance Organization/JQA-EM0210

- Anritsu Corporation
- Anritsu Infivis Co., Ltd.
- Anritsu Customer Support Co., Ltd.
- Anritsu Networks Co., Ltd.
- Anritsu Engineering Co., Ltd.
- Anritsu Kousan Co., Ltd.
- AT Techmac Co., Ltd.
- Anritsu Pro Associe Co., Ltd.
- Anritsu Devices Co., Ltd.
- Tohoku Anritsu Co., Ltd.



#### Anritsu Company (U.S.A.)

[Address] 490 Jarvis Drive, Morgan Hill, CA 95037

[Certification Date] March 2007 [Update] May 2018

[Certification Organization/Number] AMERICAN GLOBAL STANDARDS, LLC/AGS-USEMS-051618-1



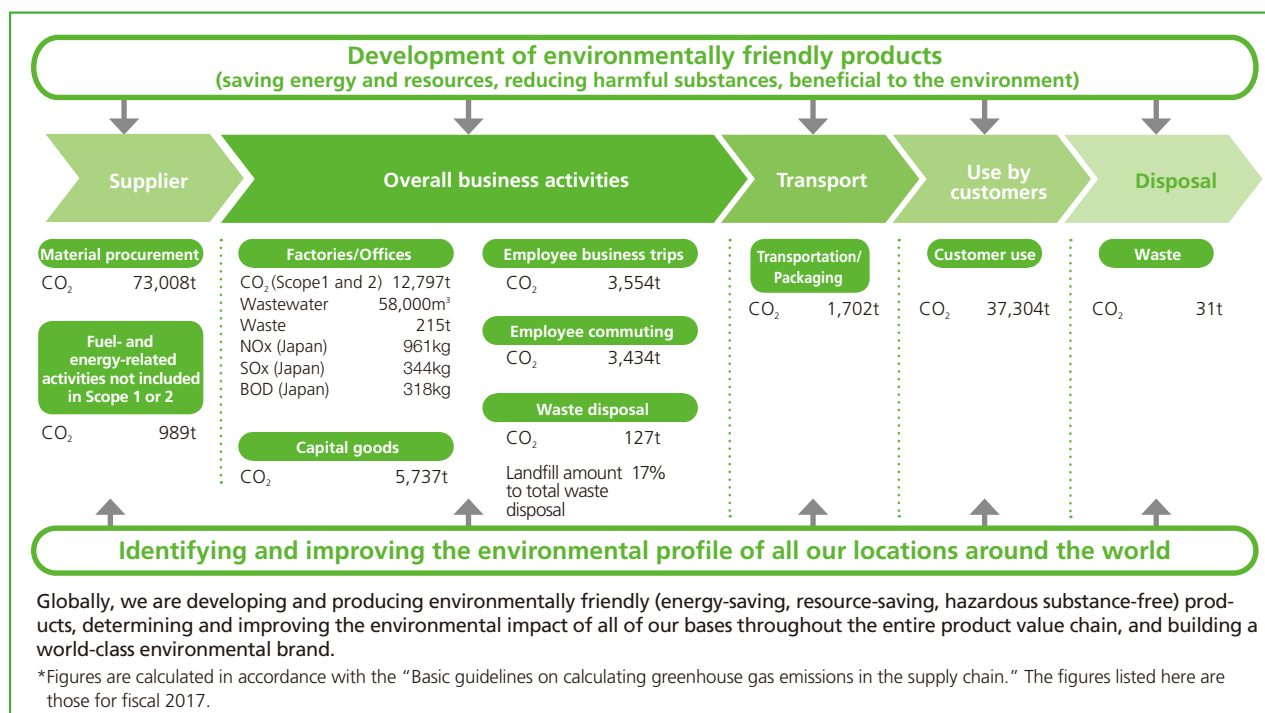
**Details (WEB)**  
Anritsu Corporation  
ISO 14001 Management  
System Certificate (English)

**Details (WEB)**  
Anritsu Company (USA)  
ISO 14001 Management  
Certificate (English)

## Medium- to long-term goals

Anritsu promotes environmental management toward realizing its 2020 VISION goal of “Building an environmental brand by pursuing global environmental management throughout the entire value chain”. From fiscal 2018, we will begin taking action for the GLP2020 Environment Initiative, the new mid-term business plan, as the final stage in realizing the 2020 VISION.

### 2020 VISION: Building an environmental brand by pursuing global environmental management throughout the entire value chain



**Details (WEB)**  
Environmental Impact of the Entire Value Chain

### Priority Themes and Objectives from the GLP2020 Environmental Initiative

| Priority Themes                                                                                        | Objectives                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Make improvements through the integration of business processes with the management system (MS)</b> | In departments involved in product realization processes, the MS is integrated into business processes, targets related to quality and the environment are set, and management is implemented through the integrated MS.<br>Construct and administer a mechanism to review compliance with environment-related laws and regulations globally |
| <b>Improve the quality of information disclosure to elevate the environmental brand</b>                | Address SDGs, transition to GRI Standards, continue participating in the Ministry of the Environment's "Environmental Reporting Platform Development Pilot Project" and revitalize communication with investors                                                                                                                              |
| <b>Strengthen energy-saving and resource-saving products (environmentally friendly products)</b>       | Reduce CO <sub>2</sub> emissions related to products (Scope 3 categories 1 and 11)                                                                                                                                                                                                                                                           |
| <b>Provide products that do not contain hazardous substances</b>                                       | Address additional and revised product and environmental regulations, such as RoHS2, and continue to provide products that do not contain hazardous substances                                                                                                                                                                               |
| <b>Reduce CO<sub>2</sub> emissions</b>                                                                 | Reducing Scope 1 and Scope 2 CO <sub>2</sub> emissions by 2% per year compared with fiscal 2015 (26% reduction by fiscal 2030)*<br>Setting long-term CO <sub>2</sub> emissions target for 2030 and 2050                                                                                                                                      |

\*Provisional target until planning for the long-term targets for 2030 and 2050 have been finalized

## Progress and challenges

In fiscal 2017, we completed the three-year GLP2017 Environmental Initiative as the second stage towards realizing the 2020 VISION. Although the plan generally progressed as expected, the remaining challenges and new challenges will continue to be addressed in the GLP2020 Environment Initiative.

| Priority Themes of GLP2017 Environmental Initiative                      | Initiative Results                                                                                                                                                                                                                                 |
|--------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Make improvement through the integration of the management system</b> | Expanded environmental initiatives within actual operations and passed the assessment for transitioning to ISO 14001:2015                                                                                                                          |
| <b>Provide information that helps elevate the environmental brand</b>    | Drew up environmental information disclosure guidelines<br>Participated in the Ministry of the Environment's "Environmental Reporting Platform Development Pilot Project" and conducted dialogue with investors<br>CDP Score: B (management) level |
| <b>Provide energy-saving and resource-saving products</b>                | Certified three models developed in the United States as Excellent Eco-Products                                                                                                                                                                    |
| <b>Provide products that do not contain hazardous substances</b>         | Completed compliance with RoHS in fiscal 2017<br>Achieved "Zero" RoHS, REACH, and other product and environmental regulation violations                                                                                                            |
| <b>Effectively use energy and water</b>                                  | Reduced energy consumption by the Anritsu Group 3.3% compared to fiscal 2014<br>Reduced water consumption by the Anritsu Group 25.4% compared to fiscal 2014                                                                                       |

## Activities

### Environmental audit

In fiscal 2017, the Anritsu Group's core manufacturing bases of Japan and the United States passed our transition audit to ISO 14001:2015 and acquired certification.

In addition, the Domestic Anritsu Group conducted internal environmental audits in July for the purpose of reviewing the conformance, effectiveness, and environmental performance of our environmental management system, and again in October for the purpose of reviewing legal compliance. In fiscal 2017, we conducted audits with an emphasis on proposals for initiative plans and compliance with the Waste Disposal and Public Cleaning Law.

Opportunities for improvement indicated by external audits and observations pointed out by internal audits are reported to the Environment Management Committee and shared and rolled out throughout all management organizations. Improvements are made for issues faced by each management organization and confirmed during the internal audit conducted in the following fiscal year.

### Environmental education for employees

To raise the environmental awareness of each employee and encourage them to actively engage in environmental activities, we provide general education through e-learning every year for all Anritsu Group employees in Japan as well as environmental education programs designed for each job type and rank. These programs are also attended by employees of business partners.

The e-learning program in fiscal 2017 covered compliance with the RoHS Directive of Europe in response to the fact that our test & measurement equipment and other core Anritsu products have been subject to regulation under the RoHS Directive since July 2017

| Educational Programs                       |                                             |                                             |
|--------------------------------------------|---------------------------------------------|---------------------------------------------|
| <b>New employee education</b>              | <b>Internal auditor training program</b>    | <b>Internal auditor follow-up education</b> |
| <b>General education</b>                   | <b>Education for technology departments</b> | <b>Education for sales departments</b>      |
| <b>Onsite consignment worker education</b> | <b>High-pressure gas handler courses</b>    | <b>Chemical substances manager training</b> |

## Environmental Awards System

The Domestic Anritsu Group gives awards to employees who have obtained environment-related qualifications, groups that have carried out environmental projects in the AQU Innovation Activities\* and employees who have offered proposals for improvement. In fiscal 2017, 26 Group projects and 128 proposals were recognized with environmental awards.

\*Activities undertaken by the Domestic Anritsu Group to improve operational efficiency, quality and other aspects.

## Environmental communication

Anritsu actively communicates inside and outside the Company with a firm belief in the vital importance of raising stakeholder awareness of our environmental activities and gaining their support for our efforts to protect the global environment.

The Domestic Anritsu Group has constructed a system for responding to stakeholders' inquiries concerning the environment. Along with releasing the Anritsu Integrated Report (formerly the Anritsu Report), Sustainability Report (formerly the CSR Report), environmental advertisements, and environment-related features, we also provide environmental information tailored for each group of stakeholders, including publishing "Anritsu Environment News" for customers and the quarterly "Eco Club" via the Intranet for employees. Furthermore, seeking to provide an accurate response to stakeholder requests for information, we are furthering compliance of the information disclosure guidelines on providing environmental information formulated by Anritsu with the GRI Standards.

We also participated in the "Environmental Reporting Platform Development Pilot Project" implemented by the Ministry of the Environment of Japan in continuation of fiscal 2016. The purpose of the project is to support the corporate disclosure of environmental information and dialogue with investors toward realizing a society and economy where sufficient funds are circulated to companies carrying out sustainable initiatives, including low-carbon activities. In fiscal 2017, we participated in the ESG Dialogue Platform Step Up Program, disclosed information, held dialogues with investors, and received a certificate of completion.

We will make every effort to ensure prompt and effective communication with our stakeholders by disclosing our environmental information, responding to environmental surveys, and exchanging opinions.

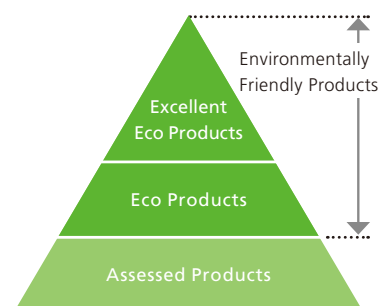
## CDP

The score for Anritsu's response to the CDP questionnaire on climate change for fiscal 2017 was "B: Management level", the same score received in fiscal 2016. This means that the "Company has considered the concrete impacts of climate change that are in line with its own businesses"

We will continue our efforts to enhance the reliability of our information disclosure and reduce CO<sub>2</sub> emissions throughout our supply chain to prevent global warming.

## Global Product Assessment and Environmentally Friendly Product Certification Program

Anritsu is promoting environmental efforts across the product life cycle from parts/materials procurement and manufacturing to shipment, customer use, and recycling/disposal, and conducts global product assessments that evaluate the effects of environmental impact reduction from the early design stage of every product's development. Evaluation items in the global product assessment cover basic factors such as improvements in volume, mass, and power consumption against a reference product (an existing product that is similar in function and performance to the product being assessed). Additional items for evaluation include resource savings and the reduction of harmful substances and overall environmental impact throughout production, physical distribution, use, and disposal. The assessment is conducted during the three stages of target setting, design review, and evaluation. We have established an environmentally friendly product program that certifies products as Excellent Eco-Products\* and Eco-Products based on the global product assessment scoring results. Environmentally friendly products accounted for about 79% and Excellent Eco-Products for about 72% of Anritsu's sales of measuring instruments for fiscal 2017.



\*Top ranking products in the industry that meet the environmentally friendly standards independently established by Anritsu. These products are indicated in catalogs and such with the Excellent Eco Product mark. This mark is categorized under international standard ISO 14021 Environmental labels and declarations — Self-declared environmental claims (Type II environmental labelling).



## List of Excellent Eco-Products Certified in Fiscal 2017

| Model Name                                   |                       | Rate of Reduction |        |                   |    |
|----------------------------------------------|-----------------------|-------------------|--------|-------------------|----|
|                                              |                       | Volume            | Mass   | Power Consumption |    |
| Ultraportable Spectrum Analyzer              | MS2760A               | 89.0 %            | 83.0 % | 83.0 %            | *1 |
| Power Master                                 | MA24507A              | 96.0 %            | 81.0 % | 10.0 %            | *1 |
| Signal Quality Analyzer-R                    | MP1900A               | 64.4 %            | 49.0 % | 14.0 %            | *2 |
| Signal Analyzer                              | MS2850A               | 54.2 %            | 32.0 % | 43.3 %            | *1 |
| Network Master Pro<br>100 G Multirate Module | MT1000A<br>+MU100011A | 74.6 %            | 68.2 % | 42.3 %            | *1 |

\*1 Compared to the reference product

\*2 Compared to the reference product at the same level of functionality and performance

[Details \(WEB\)](#)  
 List of Excellent  
 Eco-Products

## TOPICS

## Developing the MP1900A Signal Quality Analyzer-R

The MP1900A Signal Quality Analyzer-R was developed under the concept of integrating the functions enabled by multiple measuring instruments in the past into a single unit. By enabling a single module through hybrid IC integration, actively adopting low-power consuming components, and finely controlling the power source of components depending on the operational conditions to reduce unnecessary energy consumption, we decreased the new model's volume by 64 %, mass by 49 %, and power consumption by 14 % compared with the conventional model at the same level of functionality and performance.

MP1900A  
Signal Quality Analyzer-R

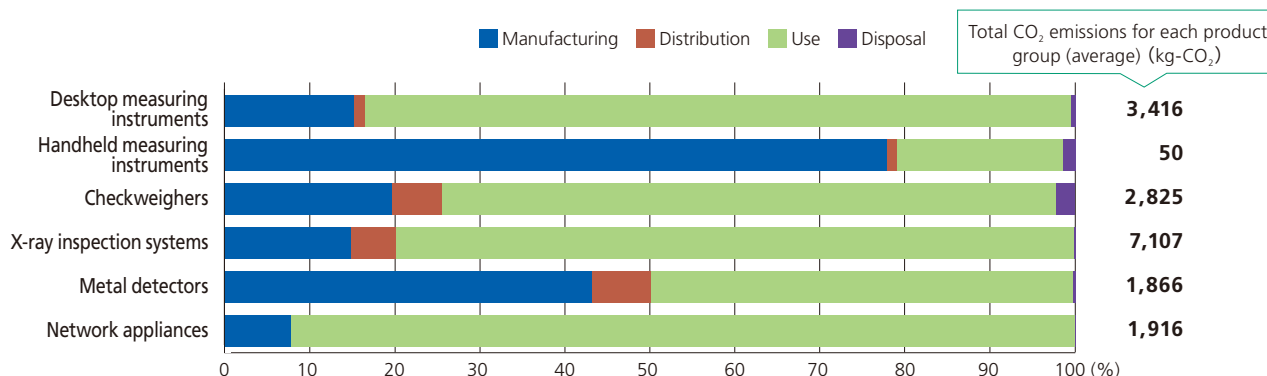
64% less volume

49% less mass

14% less power consumption

CO<sub>2</sub> emissions across the life cycle of our products

The Domestic Anritsu Group is aware of the CO<sub>2</sub> emissions at each stage of the product life style.










CO<sub>2</sub> Emissions and Breakdown across the Life Cycle of Product Groups (fiscal 2017)

## Promotion of supply chain management










The provision of environmentally friendly products requires the use of parts and materials that reduce environmental impact. The Anritsu Group upholds environmentally friendly supply chain management through green procurement and conducts research on the chemical substances in the parts it purchases, in accordance with the Basic Rules of Procurement. For more information, please see "Supply Chain Management" on page 22.

## Environmental Impact Mass Balance\*<sup>1</sup> (fiscal 2017)

### Input

|                                                                                                                                                                                                         |                        |         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------|
|  <b>Electricity</b><br>Electric power purchased from power companies for use at manufacturing sites and offices        | 28,145 MWh             | -3.3 %  |
|  <b>Gas</b><br>City gas, LPG, and natural gas used as energy                                                           | 186,248 m <sup>3</sup> | 7.7 %   |
|  <b>Fuels</b><br>Heavy oil, diesel, and gasoline used in factories, offices, and vehicles, etc.                        | 436 kℓ                 | -13.2 % |
|  <b>Water</b><br>Municipal water, groundwater (excluding recycled water)                                               | 70,837 m <sup>3</sup>  | -11.8 % |
|  <b>Chemical substances</b><br>HFC, PFC, SF <sub>6</sub> , N <sub>2</sub> O                                          | 231 kg                 | 10.2 %  |
|  <b>Chemical substances</b><br>Chemical substances that are regulated by laws in Japan * <sup>2</sup> * <sup>3</sup> | 7 t                    | -41.1 % |
|  <b>Chemical substances</b><br>PRTR                                                                                  | 2 t                    | -15.1 % |
|  <b>Paper</b><br>Copy paper used at factories and offices                                                            | 22 t                   | -18.1 % |
|  <b>Packaging material</b><br>Packaging material for transportation of products                                      | 377                    | 5.6 %   |

### Output

|                                                                                                                                                                                                                                                                                                                                                        |                       |         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------|
|  <b>CO<sub>2</sub> *<sup>4</sup></b><br>Carbon dioxide generated as a result of using electricity, gas, and fuels (CO <sub>2</sub> emission was calculated using the conversion factor defined in fiscal 2010 by the Federation of Electric Power Companies of Japan) | 12,797 t              | -10.4 % |
|  <b>NOx *<sup>5</sup></b><br>Nitrogen oxides generated as a result of using gas and fuels                                                                                                                                                                             | 961 kg                | -51 %   |
|  <b>SOx *<sup>5</sup></b><br>Sulfuric oxides generated as a result of using gas and fuels                                                                                                                                                                             | 334 kg                | -45.5 % |
|  <b>Wastewater</b><br>Wastewater discharged from manufacturing sites and offices                                                                                                                                                                                      | 58,373 m <sup>3</sup> | -11.2 % |
|  <b>BOD</b><br>Biochemical oxygen demand in wastewater                                                                                                                                                                                                              | 318 kg                | -6.1 %  |
|  <b>Municipal waste in Japan</b><br>Waste other than industrial waste that is generated as a result of business activities (such as kitchen waste, waste paper, and waste wood)                                                                                     | 41 t                  | 5.2 %   |
|  <b>Industrial waste in Japan</b><br>Waste generated as a result of business activities, that is regulated by the 'Waste Disposal and Public Cleaning Law' such as sludge, waste plastics, waste acid, and waste alkali                                             | 65 t                  | 3.9 %   |
|  <b>Waste outside Japan</b><br>All waste generated by business activities                                                                                                                                                                                           | 109 t                 | -45 %   |
|  <b>→ Recycling rate</b>                                                                                                                                                                                                                                            | 82 %                  | 14.8 %  |

\*<sup>1</sup> Environmental impact mass balance: Environmental impact expressed in the form of a balance sheet in which substances entering the company are identified and listed by name and mass in one column and substances and mass exiting the company are identified and listed in the other column to more clearly display the relationship between business activities and environmental impact.

\*<sup>2</sup> Substances regulated by law include toxic, deleterious and hazardous substances, organic solvents, and specified chemical substances.

\*<sup>3</sup> A heavy oil used as fuel is not included.

\*<sup>4</sup> Calculated using the "Emissions factor by electric utility" under the Ministry of the Environment's "Greenhouse Gas Emissions Accounting, Reporting, and Disclosure System" for electric power in Japan; the emissions factor reported by electric companies for electric power in the United States; the emissions factor from the BEIS GOVERNMENT GHG CONVERSION FACTORS FOR COMPANY REPORTING for electric power in the United Kingdom; and the emissions factor under the Ministry of the Environment's "Greenhouse Gas Emissions Accounting, Reporting, and Disclosure System" for energy other than electric power in Japan and outside of Japan. Data include the CO<sub>2</sub> conversion values for greenhouse gases other than CO<sub>2</sub>.

\*<sup>5</sup> For NOx and SOx, annual emissions are calculated based on values measured annually.

Details (WEB)  
Environmental Impact  
Mass Balance Data



## Environmental Accounting (The Domestic Anritsu Group Fiscal 2017)

| Category                       |                                                                       |                                            | Environmental conservation cost |                           | Benefits                               |   |                          |   |
|--------------------------------|-----------------------------------------------------------------------|--------------------------------------------|---------------------------------|---------------------------|----------------------------------------|---|--------------------------|---|
| Category                       | Breakdown                                                             |                                            | Investment<br>(millions of yen) | Cost<br>(millions of yen) | Economic benefits<br>(millions of yen) |   | Environmental Impact     |   |
| Business area cost             | Pollution prevention cost                                             |                                            | 0.0                             | 6.0                       | 146.3                                  | * | —                        |   |
|                                |                                                                       |                                            | 0.0                             | 3.9                       | 146.3                                  | * | —                        |   |
|                                | Global environmental conservation cost                                | Prevention of global warming               | 17.1                            | 14.7                      | 32.4                                   |   | 798.3t-CO <sub>2</sub>   |   |
|                                |                                                                       |                                            | 8.2                             | 22.0                      | 28.4                                   |   | 712.4t-CO <sub>2</sub>   |   |
|                                | Resource circulation cost                                             | Resource recycling/ utilization activities | 2.2                             | 64.4                      | 0.1                                    |   | 3.2t                     |   |
|                                |                                                                       |                                            | 0.0                             | 92.4                      | 0.0                                    |   | —                        |   |
|                                |                                                                       | Waste disposal cost                        | 0.0                             | 41.1                      | 14.1                                   |   | 358.2t                   |   |
|                                |                                                                       |                                            | 0.0                             | 45.7                      | 15.1                                   |   | 323.5t                   |   |
| Upstream/ downstream cost      | Green purchasing/procurement cost                                     |                                            | 0.0                             | 24.9                      | 62.7                                   | * | 1,604.4t-CO <sub>2</sub> | * |
|                                |                                                                       |                                            | 0.0                             | 24.8                      |                                        |   |                          |   |
|                                | Design of environmentally friendly products                           |                                            | 0.0                             | 20.7                      |                                        |   |                          |   |
|                                |                                                                       |                                            | 0.0                             | 21.6                      |                                        |   |                          |   |
|                                | Recycling and treatment of products, containers, and packaging        |                                            | 0.0                             | 0.0                       |                                        |   |                          |   |
|                                |                                                                       |                                            | 0.0                             | 0.0                       |                                        |   |                          |   |
| Administration cost            | Environmental education/training                                      |                                            | 0.0                             | 18.6                      | 0.0                                    |   | —                        |   |
|                                |                                                                       |                                            | 0.0                             | 19.0                      | 0.0                                    |   | —                        |   |
|                                | Operation and maintenance of EMS and internal audit                   |                                            | 0.0                             | 79.7                      | 0.0                                    |   | —                        |   |
|                                |                                                                       |                                            | 0.0                             | 64.4                      | 0.0                                    |   | —                        |   |
|                                | Environmental load monitoring and measurement cost                    |                                            | 0.0                             | 17.1                      | 0.0                                    |   | —                        |   |
|                                |                                                                       |                                            | 0.0                             | 18.2                      | 0.0                                    |   | —                        |   |
|                                | Personnel expenses for environmental management                       |                                            | 0.0                             | 10.7                      | 0.0                                    |   | —                        |   |
|                                |                                                                       |                                            | 0.0                             | 9.2                       | 0.0                                    |   | —                        |   |
|                                | Greening and upkeep of greenery                                       |                                            | 0.0                             | 13.2                      | 0.0                                    |   | —                        |   |
|                                |                                                                       |                                            | 0.0                             | 12.6                      | 0.0                                    |   | —                        |   |
| Social activity cost           | Support for community groups, environmental conservation bodies, etc. |                                            | 0.0                             | 1.8                       | 0.0                                    |   | —                        |   |
|                                |                                                                       |                                            | 0.0                             | 2.2                       | 0.0                                    |   | —                        |   |
|                                | Disclosure of information                                             |                                            | 0.0                             | 10.2                      | 0.0                                    |   | —                        |   |
|                                |                                                                       |                                            | 0.0                             | 8.9                       | 0.0                                    |   | —                        |   |
| R&D cost                       | Research and development to reduce environmental impacts              |                                            | 0.0                             | 0.8                       | 0.0                                    |   | —                        |   |
|                                |                                                                       |                                            | 0.0                             | 0.1                       | 0.0                                    |   | —                        |   |
| Environmental remediation cost | Cost incurred for recovery from environmental degradation             |                                            | 0.0                             | 0.0                       | 0.0                                    |   | —                        |   |
|                                |                                                                       |                                            | 0.0                             | 0.0                       | 0.0                                    |   | —                        |   |
| Total                          |                                                                       |                                            | 19.3                            | 323.9                     | 255.6                                  |   | —                        |   |
|                                |                                                                       |                                            | 8.2                             | 344.9                     | 263.5                                  |   | —                        |   |

\* The figures for “Environmental conservation cost” and “Benefit” in the shaded cells of the lower rows indicate the results for fiscal 2016.

\* Effects of estimated reduction

## Environmental Compliance

### Social issues as a background

In addition to pollution-related laws and regulations relating to water quality, air quality, noise, and vibrations already in place, environmental regulations aimed at preventing global warming and the destruction of ozone are becoming stricter, as are global product regulations, as shown by the REACH regulations and the RoHS Directive.

### Policy

Please see the environmental management policy section on page 33.

### Structure

Please see the environmental management structure section on page 33.

### Medium- to long-term goals

We aim for zero violations to environmental laws and regulations.

### Progress and challenges

There were no violations to environmental laws and regulations in fiscal 2017.

### Activities

#### Water quality

The Domestic Anritsu Group has adopted standards that are more demanding than statutory regulations, and we conduct regular water quality analysis and management activities for wastewater discharged from manufacturing sites and offices.

**Details (WEB)**  
Water quality data from the Domestic Anritsu Group

#### Air quality

The Koriyama First Factory Office at the Tohoku site operates heavy oil boilers subject to the Air Pollution Control Law. The boilers are operated on our standards that are more demanding than statutory regulations to control air quality. There are no facilities at the Atsugi site, the Hiratsuka site, or the Koriyama Second Factory Tohoku site that generate air pollution that is subject to legal regulations.

**Details (WEB)**  
Air quality data for the Tohoku district

#### Noise

The Domestic Anritsu Group is implementing a variety of efforts to detect abnormalities at an early stage, including a system of prior examination before introducing equipment, equipment inspections at the beginning of every operation, and regular patrols on the premises. We also regularly monitor noise levels at the border of operations every year. At the Hiratsuka site, where there are many types of machinery, we are reducing risks by moving particularly noisy equipment to a soundproofed room and placing noise reducing covers over exhaust vents. Results show that measured noise levels not only meet legal standards but also fall below our own voluntary standards.

**Details (WEB)**  
Noise data for the Domestic Anritsu Group

## Climate Change/Energy

### Social issues as a background

The impact and scale of climate change as a result of global warming is becoming increasingly severe, and there is an increased need for measures designed to counteract climate change on an international level. Examples of these measures include the adoption of the Paris Agreement and SDG. Our stakeholders, including investors, have also become increasingly focused on developments in this area. The Anritsu Group considers climate change measures to be the most important of the environmental management issues and is accordingly committed to strengthening our related countermeasures.

### Risks and opportunities from climate change

#### Risks and opportunities driven by changes in regulation

Energy-related laws and regulations, including the Act on the Rational Use of Energy, are being tightened in line with the Paris Agreement and efforts to counteract climate change. We also believe there will be an increased need going forward to cut the absolute level of energy consumption. In order to accomplish this, it will be vital to replace or rebuild aging equipment and buildings. It will also likely require the installation and purchasing of renewable energy. As the ability to supply energy-saving products becomes more and more important, we believe Anritsu's strength in the industry is its ability to develop environmentally friendly products using the LCA (Life Cycle Assessment) evaluations and product assessment methods it adopted at an early stage of development.

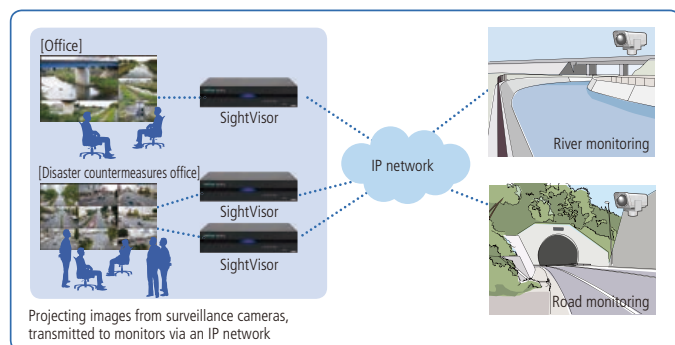
#### Risks and opportunities driven by changes in physical climate parameters

The Anritsu Group procures parts and materials from locations around the world and floods and hurricanes brought on by climate change mean that there is some risk of suppliers in affected regions being unable to supply necessary parts and materials. In response, the procurement department has mapped the manufacturing and sales locations of our suppliers and has formulated a system in which we can grasp potential damage immediately and globally. The system also allows the Anritsu Group to make purchases from several companies, thus limiting the potential for one disaster to completely disrupt supply.

#### Risks and opportunities driven by changes in other climate related developments

The Anritsu Group produces products and solutions that help society adapt to and mitigate the effects of climate change, including the SightVisor series, which provides video surveillance of water levels and flooding rivers. The Company also provides information and communications infrastructure measurement technology that is used to assess electric power demand and supply, including home energy management systems (HEMS) for smart grid.

#### Video monitoring



### Policy

Please see the environmental policy section on page 33.

### Structure

Please see the environmental management structure section on page 33.

## Medium- to long-term goals

- Reducing Scope 1 and Scope 2 CO<sub>2</sub> emissions by 2% per year compared with fiscal 2015 (26% reduction by fiscal 2030)\*
- Setting long-term CO<sub>2</sub> emissions reduction targets for 2030 and 2050
- Reducing product-related CO<sub>2</sub> emissions (Scope 3 category 1 and 11)

\*Provisional target until planning for the long-term targets for 2030 and 2050 have been finalized

## Progress and challenges

| "GLP 2017 Environmental Initiatives": Goals                        | Results |                |
|--------------------------------------------------------------------|---------|----------------|
| Reduce Anritsu Group energy consumption 3% compared to fiscal 2014 | ○       | 3.3% reduction |

We are working on updating these goals in our "GLP2020 Environmental Initiatives" plan.

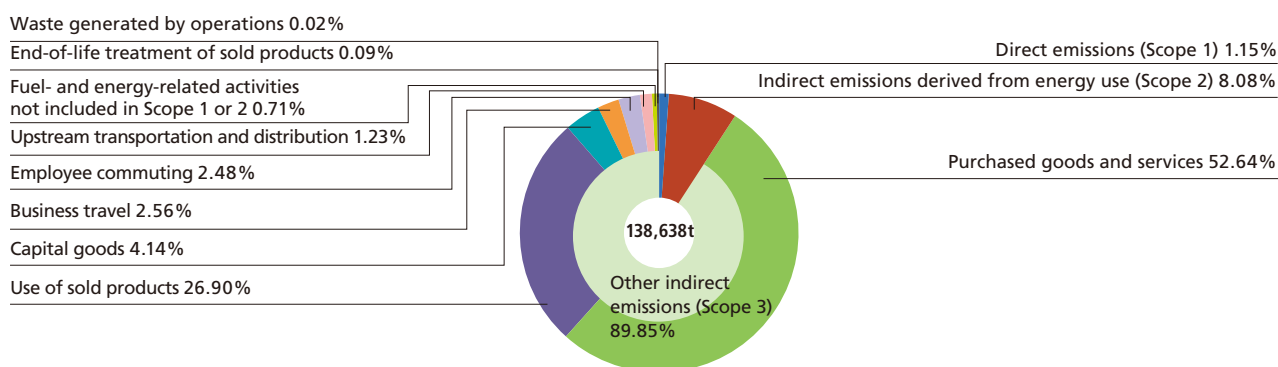
While we have focused our attention in the past on reducing energy consumption, we are expanding the focus of our activities to include the goal of reducing CO<sub>2</sub> emissions from fiscal 2018.

## Activities

CO<sub>2</sub> emissions throughout the entire value chain

We have calculated CO<sub>2</sub> emissions throughout the Anritsu entire value chain. The calculated emissions value has received third-party verification.

### Value chain CO<sub>2</sub> emissions by scope (fiscal 2017)



(t-CO<sub>2</sub>)

| CO <sub>2</sub> emission volume       | FY 2012 | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 |
|---------------------------------------|---------|---------|---------|---------|---------|---------|
| Total CO <sub>2</sub> emission volume | 129,251 | 158,900 | 155,941 | 162,957 | 141,906 | 138,683 |
| Scope1                                | 3,124   | 2,376   | 1,669   | 1,722   | 1,698   | 1,591   |
| Scope2 (Market based)                 | 12,259  | 11,045  | 13,396  | 13,387  | 12,581  | 11,206  |
| Scope2 (Location based)               | 14,276  | 14,174  | 14,262  | 15,310  | 14,741  | 12,354  |
| Scope3*1 *2 *3                        | 113,867 | 145,479 | 140,876 | 147,848 | 127,626 | 125,885 |

\*1 Categories subject to calculation in fiscal 2012: 1, 4-7, 11, 12

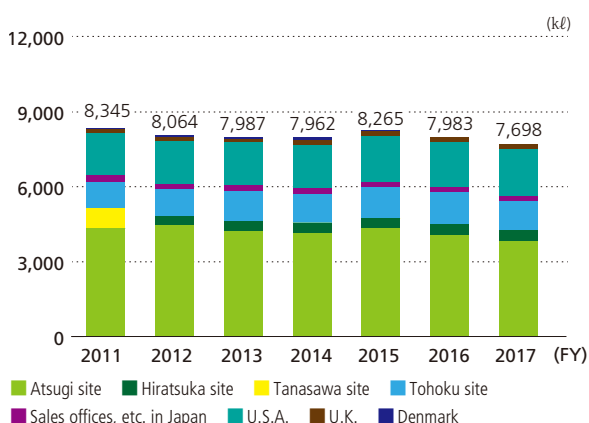
\*2 Categories subject to calculation in fiscal 2013: 1, 2, 4-7, 11, 12

\*3 Categories subject to calculation in fiscal 2014 and thereafter: 1-7, 11, 12

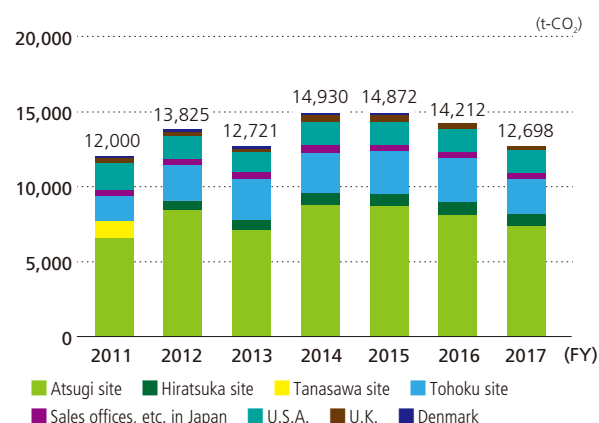
## Energy-saving activities at factories and offices

More than 99% of CO<sub>2</sub> emission volume (Scope 1, 2) at the Anritsu Group is from the use of energy. As a result of our efforts to reduce energy use, we have cut our energy consumption (in crude oil equivalent) by about 22% over 10 years. In fiscal 2017, we implemented “cool biz” and “warm biz” policies at the Domestic Anritsu Group, a revision in workstyles to cut down on overtime and improve Life-Work Balance, and the updating to high efficiency air conditioners, which resulted in energy consumption for the Anritsu Group dropping 3.6% from fiscal 2016.

Energy Use (Crude Oil Conversion)



CO<sub>2</sub> Emissions from Energy Use



| Initiatives outside the Domestic Anritsu Group                                                                                                                                           | Result for Fiscal 2017                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| Improving the basic unit of energy by 1 % every year toward 2020<br>(Program promoted by the electric and electronics-related industries in Japan for establishing a low carbon society) | 8.3 % improvement from base year<br>(fiscal 2012) |
| Achieve annual reductions of at least 1 % in the basic unit of energy consumption per sales under the Act on the Rational Use of Energy                                                  | Over 1.4 %                                        |

## Renewable energy

Anritsu has solar power generators with maximum output capacity of 200 kW and 15 kW installed at the Koriyama Second Factory and Global Headquarters Building, respectively. In fiscal 2017, the Koriyama Second Factory used 197 MWh of renewable energy generated by solar power, representing about 13% of its total electricity needs, and the global headquarters building used 21 MWh of solar power, representing about 0.7% of its total electricity needs. In addition, we received third-party verification for the amount of renewable energy we generated.

Renewable energy

(MWh)

|              | FY2012 | FY2013 | FY2014 | FY2015 | FY2016 | FY2017 |
|--------------|--------|--------|--------|--------|--------|--------|
| Solar energy | —      | 216    | 212    | 241    | 227    | 233    |

\*The Koriyama Second Factory was established in fiscal 2013, and the Global Headquarters Buildings was established in fiscal 2015

## Reduced CO<sub>2</sub> Emissions from the use of products sold

Anritsu is working to reduce CO<sub>2</sub> emissions generated during product use, which has a particularly high ratio of CO<sub>2</sub> emissions across the entire value chain as well as the product life cycle.

Reducing product energy consumption<sup>\*1,\*2</sup>

|                                 | FY2012 | FY2013 | FY2014 | FY2015 | FY2016 | FY2017 |
|---------------------------------|--------|--------|--------|--------|--------|--------|
| GJ <sup>*3</sup>                | 21,501 | 25,665 | 29,852 | 27,748 | 36,713 | 31,241 |
| t-CO <sub>2</sub> <sup>*4</sup> | 1,186  | 1,416  | 1,650  | 1,611  | 2,162  | 1,604  |

\*1 Conversion coefficient x time spent in operation over one year x sales volume x reduction in power consumption when compared to a conventional product at the same level of functionality and performance

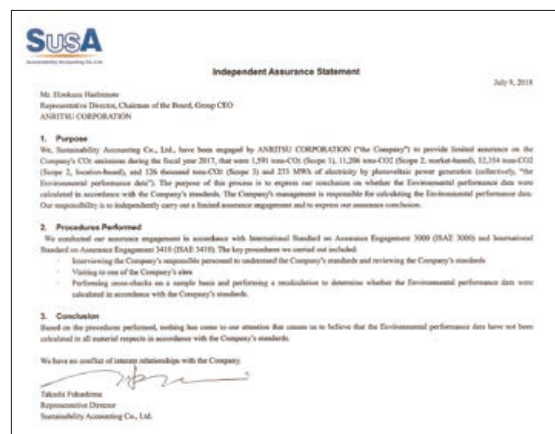
\*2 Domestic Anritsu Group hardware products for which product assessments have been conducted

\*3 Source for conversion coefficient: Act on the Rational Use of Energy

\*4 Source for conversion coefficient: Ministry of the Environment's coefficient list for emissions by electrical industry company under the calculation, reporting, and publications system

## Third-party verification of CO<sub>2</sub> emissions and annual renewable energy power generation

In order to ensure the reliability of the report, we sought and received third-party verification from the Sustainability Accounting Co., Ltd. regarding CO<sub>2</sub> emissions and annual renewable energy power generation.



## Related data

### Energy consumption<sup>\*1</sup> and reductions<sup>\*2,\*3,\*4</sup>

(GJ)

| Type of energy <sup>*5,*6</sup>              | FY2012  | FY2013  | FY2014  | FY2015  | FY2016  | FY2017  | Reductions |
|----------------------------------------------|---------|---------|---------|---------|---------|---------|------------|
| Total energy consumption in the organization | 312,326 | 309,793 | 308,465 | 320,197 | 309,232 | 298,178 | 22,019     |
| Subtotal for non-renewable energy sources    | 25,515  | 26,772  | 24,374  | 23,713  | 25,927  | 24,066  | -353       |
| Class A heavy oil <sup>*7</sup>              | 6,131   | 6,498   | 5,832   | 5,202   | 6,830   | 5,476   | -274       |
| Light oil <sup>*7</sup>                      | 232     | 291     | 269     | 285     | 262     | 223     | 62         |
| Gasoline <sup>*7</sup>                       | 9,491   | 10,678  | 10,204  | 9,925   | 10,165  | 9,113   | 811        |
| Kerosene <sup>*7</sup>                       | —       | 969     | 969     | 969     | 969     | 969     | 0          |
| City gas <sup>*7</sup>                       | 2,884   | 2,695   | 2,571   | 2,216   | 2,409   | 2,824   | -608       |
| LPG <sup>*8</sup>                            | 44      | 175     | 189     | 189     | 158     | 146     | 42         |
| Natural gas <sup>*7</sup>                    | 6,733   | 5,466   | 4,340   | 4,927   | 5,134   | 5,315   | -388       |
| Purchased electrical power <sup>*7</sup>     | 285,081 | 281,610 | 282,817 | 296,076 | 283,304 | 274,112 | 21,965     |
| Regional heating <sup>*9</sup>               | 1,729   | 1,411   | 1,274   | 408     | —       | —       | 408        |

\*1 Method for calculating energy consumption: Volume purchased x conversion coefficient

\*2 Method for calculating reduced energy consumption: 2015 energy consumption – 2017 energy consumption

\*3 Base year for reduction comparisons is fiscal 2015

\*4 Reason for choosing base year: 2015 was chosen as this was the year the global headquarters building was completed, which ushered in major changes in the use of energy-saving equipment.

\*5 Cooling and heating, and energy sold are not derived from renewable energy sources.

\*6 Energy consumed outside the organization not included due to the difficulty of documentation.

\*7 Source for conversion coefficient: Regulations in line with the Act on the Rational Use of Energy.

\*8 Source for conversion coefficient: Agency for Natural Resources and Energy: Act on the Rational Use of Energy, Procedure for periodic reports under Articles 15 and 19 (2) (revised March 30, 2018) 50.8 x (1/458) (propane/butane m<sup>3</sup> equivalent).

\*9 Source for conversion coefficient: Reports from operations in Denmark

### Energy unit

GJ/¥100 million

|                                           | FY2012 | FY2013 | FY2014 | FY2015 | FY2016 | FY2017 |
|-------------------------------------------|--------|--------|--------|--------|--------|--------|
| Basic unit of energy consumption (sales)* | 330    | 304    | 312    | 335    | 353    | 347    |

\* Total energy consumption/sales



## Water Resources

### Policy

Please see the environmental management policy section on page 33.

### Structure

Please see the environmental management structure section on page 33.

### Medium- to long-term goals

The Domestic Anritsu Group aims to maintain water resource utilization at a level equal or below that shown in fiscal 2017.

### Progress and challenges

| "GLP 2017 Environmental Initiatives": Goals            | Results |                 |
|--------------------------------------------------------|---------|-----------------|
| Reduce global water use by 3 % compared to fiscal 2014 | ○       | 25.4% reduction |

We will control water usage at the Domestic Anritsu Group so that it does not increase.

### Activities

#### Reducing water consumption

The devices business accounts for about 3% of sales at Anritsu, and, while water is used for cleaning of semiconductor substrates, most of the water used in the business is for facilities such as toilets and sinks used for the washing of hands. The Domestic Anritsu Group has reduced water consumption through efforts such as leakage inspections, upgrading to water-saving toilets, and the use of circulated water in facilities.

In fiscal 2017, we reduced water consumption at the Atsugi site by 8.9% from fiscal 2016 by continuing to perform leakage inspections and repairs, moving employees to buildings with water-saving toilets, and reducing employee overtime hours by reviewing the ways they work.

The Hiratsuka site uses alkaline washing agents to degrease metallic materials, and the rinsing water used by the facility in this process is reused by circulating it through filters and ion-exchange resins, which reduces annual water consumption by approximately 40m<sup>3</sup>.

California, where Anritsu Company (U.S.A.) is located, is subject to frequent droughts, and since 2012 some of these have been the most severe. The worst drought on record occurred in 2015, forcing the governor to request that all California residents reduce their water use by 20%. The Anritsu Company was able to reduce its water consumption by about half from fiscal 2013 to fiscal 2015 through efforts such as replacing a water-intensive lawn with plants that can withstand dehydration and introducing water-saving toilets. We reduced water usage in 2017 by 37% compared to fiscal 2014.

## Consideration for Water Resources

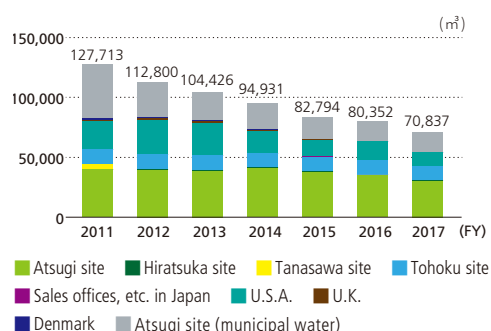
The Anritsu Group used 70,837m<sup>3</sup> of water in fiscal 2017. The Company's water sources include 16,466m<sup>3</sup> of underground water at the Atsugi site as well as city water sourced from surface water, including rivers.

At the Atsugi site, where we use groundwater to flush toilets, we have reduced our use of groundwater to about a quarter of the volume in the past 10 years by upgrading to water-saving toilets. And considering the possibility of groundwater depletion and flooding caused by heavy rainfall, we installed a rainwater permeation basin at the global headquarters building to facilitate the penetration of rainwater into the ground.

### Efforts to Protect Water Resources

| Details of our efforts                                                     | Atsugi site | Hiratsuka site | Tohoku site | U.S.A. |
|----------------------------------------------------------------------------|-------------|----------------|-------------|--------|
| Introduced a body detection sensor for men's toilets                       | ○           |                | ○           | ○      |
| Introduced water-saving toilets                                            | ○           |                | ○           | ○      |
| Introduced automatic faucets                                               | ○           |                | ○           |        |
| Used groundwater for flushing toilets                                      | ○           |                |             |        |
| Reuse of rinse water from the metal degreasing unit                        |             | ○              |             |        |
| Installed a rainwater permeation basin                                     | ○           |                |             |        |
| Installed water-saving valves for faucets                                  | ○           |                |             |        |
| Installed a sound emulator, "Otohome," for toilets                         | ○           |                |             |        |
| Conducted leakage inspections                                              | ○           | ○              | ○           |        |
| Upgraded to high-efficiency water heaters                                  |             |                |             | ○      |
| Replanted plants that can withstand dehydration                            |             |                |             | ○      |
| Replaced to a drip water supply system                                     |             |                |             | ○      |
| Introduced a waterless method for cleaning windows                         |             |                |             | ○      |
| Arranged an inspection of a water supply facility by external institutions |             |                |             | ○      |
| Participated in Mt. Fuji Green Fund Afforestation Efforts                  | ○           | ○              |             |        |
| Participated in a cleanup of the Sagami River                              | ○           |                |             |        |

### Water Consumption



## Preserving Biodiversity

### Policy

The Anritsu Group has formulated and implemented a basic policy on preserving biodiversity based on its understanding of the relationship between the Company's business activities and biodiversity. Since we have no specific business activities that have a direct impact on biodiversity, our policy for preserving biodiversity is focused on activities aimed at reducing environmental impacts. Our efforts are centered on three areas: 1) the promotion of activities aimed at preventing global warming in order to mitigate climate change; 2) the promotion of resource saving and recycling with an aim to limit overexploitation and habitat loss; and 3) controlling the release of chemical substances in order to reduce pollution and habitat loss.

In addition to these efforts, we are also actively participating in social contribution activities, including greening and cleaning activities, with an eye toward bolstering the regenerative capacity of the environment. Our on-site greening activities focus on the planting of trees and vegetation similar to that originally in the area, with a special eye toward plant life that conforms to the climate and soil of the area.

## Biodiversity Conservation

## Basic Policy

We strive to reduce environmental impact, focusing on the following three areas of our business activities:

- Mitigation of climate change
- Control overexploitation/habitat loss
- Control pollution/habitat loss

| Business Operations                                                                            | Activities to Reduce Environmental Impact                                                                                                                                                                                                                                |
|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Business activities with environmental impact limited within an acceptable range for the Earth | <ul style="list-style-type: none"> <li>● Global warming prevention → Mitigation of climate change</li> <li>● Resource-saving/recycling → Control overexploitation/habitat loss</li> <li>● Control chemical substance release → Control pollution/habitat loss</li> </ul> |
| Social Contribution Activities                                                                 | Activities to Reduce Environmental Impact                                                                                                                                                                                                                                |
| Increase the regenerative capacity of the Earth                                                | <ul style="list-style-type: none"> <li>● Social contribution activities for biodiversity<br/>→ Joined the tree planting activities, local cleanups, etc.</li> </ul>                                                                                                      |

## Activities

### Joined the Declaration of Biodiversity by "Keidanren" Promotion Partners

The Domestic Anritsu Group has endorsed Nippon Keidanren's Declaration of Biodiversity and participates as a promotion partner to exercise leadership in creating a society that values and supports biodiversity.

### Participation in the *Nijyu-maru* Project (Double 20 campaign)

The Domestic Anritsu Group in fiscal 2017 pledged its contribution toward achieving the Aichi Biodiversity Targets as part of the *Nijyu-maru* Project, which is being run by the International Union for the Conservation of Nature – Japan (IUCN-J).\*

| Activity name                                                        | Actions                                                                                                                                                                                                              | Target                                                                         |
|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| Participation in the Mt. Fuji "Forest fund-raising" greening project | This project has been active since 2000 and focuses on reviving forests cleared by the 1996 typhoon over a span of 80 years. Anritsu has been a participant since 2006.                                              | Habitat destruction<br>Preserving vulnerable ecosystems<br>Ecosystem servicing |
| Greening during new construction                                     | We planted trees and vegetation appropriate to the climate and soil of the area on the grounds and surrounding area of the Anritsu global headquarters building, for which construction was completed in March 2015. | Habitat destruction<br>Ecosystem servicing                                     |

\*Citizen groups, companies, and local governments declared their support and registered activities for achieving the 20 Aichi Targets at the 10th Ordinary Meeting of the Conference of the Parties to the Convention on Biological Diversity (COP10).

## Preventing Environmental Pollution

### Social issues as a background

The use and control of chemical substances is becoming an increasingly important issue given a tightening in regulations in regard to their handling. These regulations and laws include the Pollutant Release and Transfer Register (PRTR) Law, which focuses on the emission of specific chemical substances and improved management, the Poisonous and Deleterious Substances Control Act, the Industrial Safety and Health Act, the Fire Service Act, the Water Pollution Prevention Law, the Air Pollution Control Act, and the Soil Contamination Countermeasures Act. The management of chemical substances contained within parts and materials is also important given a tightening in related regulations such as the EU's RoHS Directive, which focuses in particular on chemical substances within products.

## Policy

Please see the environmental management policy section on page 33.

## Structure

Please see the environmental management structure section on page 33.

## Medium- to long-term goals

Zero excess of the voluntary management limit for industrial wastewater (Atsugi site)

## Progress and challenges

| Target                                                                                         | Result |
|------------------------------------------------------------------------------------------------|--------|
| Maintain zero excess of the voluntary management limit for industrial wastewater (Atsugi site) | ○      |

We will work to maintain zero excess of the voluntary management limit.

## Activities

### Chemical Substances Management

Use of chemical substances by the Domestic Anritsu Group is determined by designating banned or restricted substances in manufacturing from the standpoints of environmental regulations, hazardousness, safety and health, and disaster prevention, and having expert evaluators with knowledge of each criterion conduct prior assessments. In addition, the amounts of chemical substances purchased, used, and disposed of within a three-month period are entered into a chemical substances management system. We use this database to compile the amount of substances subject to the Pollutant Release and Transfer Register (PRTR) Law, calculate the total stored amount of hazardous materials as designated by the Fire Service Act as well as the emission of greenhouse gases, and monitor chemical substances designated by revisions in laws and regulations. We also consider replacing substances with safer alternatives as necessary.

In fiscal 2017, the handling volume at the Tohoku site of methylnaphthalene, a substance found within the Class-A heavy oil used in boilers, exceeded 1t. As this substance falls under the PRTR Law, we calculated the transfer amount and submitted reports to the appropriate regulatory authorities. Methylnaphthalene is burned in boilers and very little is released externally, but we will still work to reduce handling volume moving forward.


### Regulated Chemical Substances in manufacturing by the Anritsu Group

|                                               |                                                                                                                                                                                                           |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Banned substances in manufacturing</b>     | 7 Groups of substances: CFC (chlorofluorocarbons), halon, tetrachlormethane, 1,1,1-trichloroethane, HBFC (hydrobromofluorocarbons), bromochloroethane, methyl bromide                                     |
| <b>Suppressed substances in manufacturing</b> | 7 Groups of substances: HCFC (hydrochlorofluorocarbons), trichloroethylene, tetrachloroethylene, dichloromethane, HFC (hydrofluorocarbons), PFC (perfluorocarbons), SF <sub>6</sub> (Sulfur hexafluoride) |

## Groundwater management

In regard to organochlorine substances, we completely eliminated the use of trichloroethylene at the Atsugi site in 1970 and 1,1,1-trichloroethane in 1993, though we continue to voluntarily analyze and monitor the six designated organochlorine substances in groundwater. While levels of tetrachloroethylene were higher than permitted under environmental standards, the results of the soil survey showed that Anritsu was not responsible for trichloroethylene contamination. This data suggest that the source of contamination originated upstream from Anritsu's location, which the local government is also aware of. We will continue to conduct regular analysis and monitoring of the site.

**Details (WEB)**  
Groundwater data  
from the Domestic  
Anritsu Group



## Industrial wastewater

The Atsugi site operates an industrial wastewater treatment facility to detoxify industrial wastewater containing acids and alkali and wastewater discharged from small boilers used to adjust humidity inside cleanrooms. In fiscal 2013, we upgraded the facility, modifying the structure to incorporate a breakwater to prevent any leaks of raw water, intermediary wastewater, or chemicals used for treatment from the tanks. We further reduced the risk by adding a second monitoring system to ensure that water exceeding the permitted pH limit would not be discharged into the surrounding environment.

The Hiratsuka site uses alkaline washing agents to degrease metallic materials but does not discharge industrial wastewater. While there are no facilities that discharge industrial wastewater at the Tohoku site, we have installed a pH monitor and emergency cutoff valve to address the risk of water being discharged from boilers and septic tanks in the event of malfunction.

Each site has developed response procedures to address the potential leakage of chemical substances due to human error or natural disaster. Regular equipment inspections and training are also conducted, and necessary revisions are made to prepare for unexpected accidents.

## PCB Management

At the Atsugi site, we tightly control equipment such as condensers, transponders, and fluorescent ballasts that contain polychlorinated biphenyl (PCB) within the storage standards for specially controlled industrial waste. Storage status is reported annually to the local government in Japan. With respect to condensers, which constitute a portion of high concentration PCB waste, processing at Japan Environmental Storage & Safety Corporation (JESCO) Tokyo Facility was completed in fiscal 2016. Our analysis also revealed that pressure-sensitive copying paper came under the category of low-concentration PCB waste, and we contracted a government-certified treatment company to properly treat the waste.

With regard to ballasts containing a high concentration of PCB among the remaining PCB waste, we completed loading and unloading registration for consigned processing with JESCO Hokkaido Facility. We are also moving ahead with preparations for the early treatment of waste contaminated with a low concentration of PCB, mainly transponders, in view of the recent rise in the number of licensed processing companies.

# Resources Recycling

## Policy

Please see the environmental management policy section on page 33.

## Structure

Please see the environmental management structure section on page 33.

## Medium- to long-term goals

- Maintain zero emissions\* at the Domestic Anritsu Group
- Maintain industrial waste volume at the Domestic Anritsu Group at 67 tons or lower
- Maintain general waste output at Atsugi site at 36 tons or lower

\*Zero emissions is defined as achieving a directly landfilled and burned disposal rate of less than 0.5%.

## Progress and challenges

Achievement in relation to resource cycle targets in fiscal 2017 are as follows:

| Goals                                                                                                                        | Result |                                      |
|------------------------------------------------------------------------------------------------------------------------------|--------|--------------------------------------|
| Maintain zero emissions at the Domestic Anritsu Group                                                                        | ○      | Zero incineration and landfill waste |
| Maintain industrial waste emissions under 45 tons at Atsugi site                                                             | ○      | 36.5t                                |
| Maintain industrial waste emissions under 13 tons at Hiratsuka site                                                          | ○      | 12.9t                                |
| Maintain industrial waste emissions under 9 tons at Tohoku site                                                              | ○      | 7.8t                                 |
| Reduce the volume of municipal waste under 33 tons that is carried to a facility of the Atsugi City government (Atsugi site) | ○      | 31.6t                                |

\* We will review some targets and will continue to work toward reducing waste emissions.

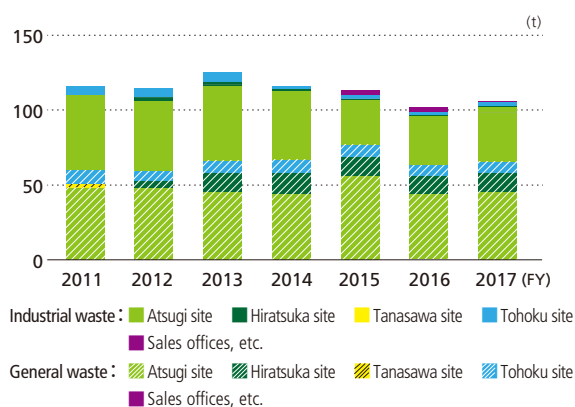
## Activities

### Waste reduction

The Domestic Anritsu Group is promoting “3R” activities and the separation of waste in our offices and production lines. We replaced special wooden frames used to ship components produced abroad to Japan with rented plastic frames, which led to a reduction of wood waste in fiscal 2016. We installed in fiscal 2015 a raw garbage disposal tank at the Atsugi site, and a second in fiscal 2017. This second tank allows the decomposition of about 3.2 tons of raw garbage, which would have otherwise been disposed of as general waste. We also aim to shift some waste oil from thermal recycling to material recycling.

\* Landfill disposal tanks are installed underground, where the temperature remains stable. Raw garbage can simply be thrown into the tank, where it decomposes naturally with both anaerobic and aerobic bacteria, significantly reducing the volume of garbage. It works like a large compost bin that does not require periodic maintenance and does not consume any electricity.

Change in Volume of Waste (Domestic Anritsu Group)



Volume of Waste Generated by the Domestic Anritsu Group by Treatment Method and Waste Type (Including valuables)

| Treatment method   | Type of waste             | FY2017 (t) |
|--------------------|---------------------------|------------|
| Material recycling | Metal scraps              | 131.7      |
|                    | Paper                     | 89.9       |
|                    | Plastics                  | 5.8        |
|                    | Sludge                    | 2.0        |
|                    | Glass/ceramic scraps      | 1.0        |
|                    | Woodchips                 | 0.9        |
|                    | Oil                       | 0.2        |
|                    | Animal and plant residues | 40.3       |
|                    | Plastics                  | 24.6       |
|                    | Oil                       | 15.4       |
| Thermal recycling  | Sludge                    | 8.2        |
|                    | Woodchips                 | 5.9        |
|                    | Paper                     | 2.4        |
|                    | Alkali                    | 1.2        |
|                    | Acid                      | 0.7        |
|                    |                           |            |
|                    |                           |            |



## Environmental Considerations in Packaging

The Domestic Anritsu Group seeks to reduce the volume of packaging materials. Along with our packaging subcontractors, we are taking steps to completely discontinue the use of shock-absorbing material for packaging, made of urethane foam, which is produced using a liquid concentrate containing Methylenebis (4, 1-phenylene) diisocyanate, designated as a Class I Designated Chemical Substance under the PRTR Law.

### Eco-friendly packaging efforts at the Domestic Anritsu Group

|                                              | Target product group                      | Action                                                                                                                                                  | Result                                                                                                    |
|----------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Polyethylene foam packaging (PEF packaging)  | Desktop measuring equipment <sup>*1</sup> | Using polyethylene foam as a cushioning material                                                                                                        | Zero use of urethane foam<br>Volume reduction of 40%                                                      |
| Cardboard as a cushioning material packaging | Handheld measuring equipment              | Using corrugates cardboard as a cushioning material<br>Packaging of standard attachments and optional parts in cardboard cushioning material gaps       | Zero use of urethane foam<br>Volume reduction of 40%                                                      |
| Eco-logistics                                | Products for sale in Japan                | Reusable boxes for delivery and pickup (cushioning material is also reusable)<br>Simplified product packaging<br>Packaging with protective polyethylene | Reuse of packaging materials reduces waste emissions by 94% compared to regular packaging <sup>*2</sup> . |
| No packaging                                 | Large products                            | Use of pipe frames (pipes are reusable)                                                                                                                 | Shift from crates that were disposed of after use to pipe frames means zero waste emissions.              |

\*All packaging materials must protect the product from shock and vibrations while in transport.

\*1 Desktop measuring equipment being developed from fiscal 2016 is, in principle, shipped using PEF packaging.

\*2 Assuming eco-logistics boxes are reused 20 times

## Recycling Used Products

Anritsu led the measuring instrument industry in establishing the Recycling Center at Anritsu Kousan Co., Ltd., in 2000. Anritsu Kousan obtained a license to engage in the industrial waste disposal business in September 2002 and started operating in fiscal 2003. The center is primarily engaged in treating products used by customers.

In fiscal 2017, the center received 127 tons of used products and equipment generated by the Anritsu Group and recycled nearly 100% of the waste after disassembling and sorting, shipping 95% of the resultant material as valuable resources.

The center promotes the refurbishment of used products. A selection of equipment used in demonstrations is reconditioned and calibrated by Anritsu and then delivered with a one-year guarantee, thus extending the lives of the products.

### Recycling System for Used Products

