AT TOKYO

Environmental Initiatives

Fiscal 2020 version

@Tokyo

Eco-friendly while Providing Peace of Mind

We, AT TOKYO data centers, promise safety and security
for your business, maintaining high-level service
and zero-downtime operation.
We remain highly conscious of the environment,
even as we consume large amounts of energy
and operate various facilities every day.

Safety and security of
zero downtime for
your business.

Environmental
considerations such as
energy conservation
and recycling.
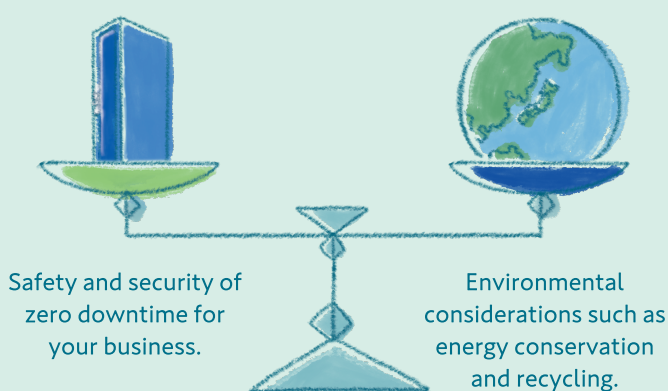
AT TOKYO aims to provide environmentally friendly data centers.

NEWS SWIT® installed for efficient cooling in all electrical rooms of Chuo Data Center

One of the most important factors in energy conservation for us has been to optimize the cooling of electrical rooms that accommodate many heat-generating devices. As a result, AT TOKYO installed SWIT® in its Chuo Data Center electrical rooms. This promotes stratification of hot and cold air by creating rotational flow and prevent their mixing with each other and enables efficient cooling and ventilation of the space.

In the first year, great reductions were achieved from experimental operation in one room. Following this success, installation was expanded to 5 rooms in the second year, followed by the remaining 12 rooms in the third, with installation in all the rooms completed as of the end of fiscal 2020. This helped decrease cooling power consumption by 90% compared to the conventional method, leading to installation expenses being recovered in two years.

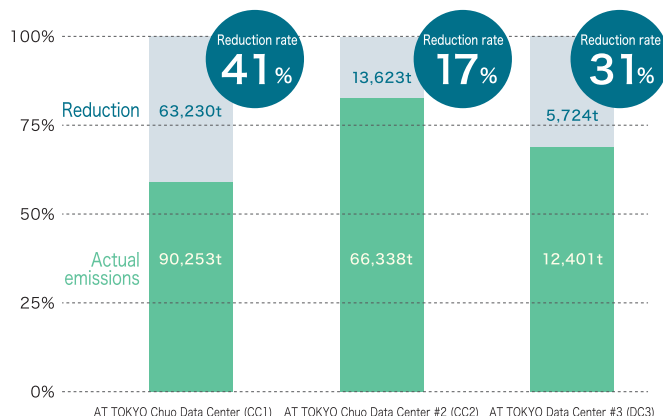SWIT® (Takasago Thermal
Engineering Co., Ltd.)
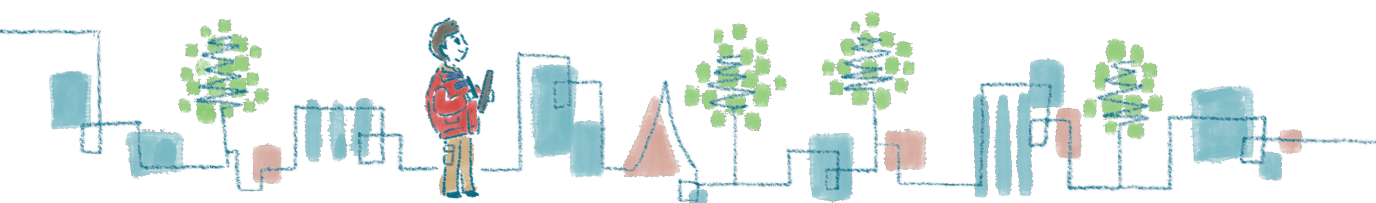
AT TOKYO's Energy Conservation in Numbers

Because data centers consume a large amount of energy, AT TOKYO has worked on reducing greenhouse gas (GHG) emissions through a variety of efforts, both large and small.

AT TOKYO not only meets greenhouse gas reduction obligations*, but also continued to expand its margin of emission reduction every year in Chuo Data Center (CC1), Chuo Data Center #2 (CC2) and Data Center #3 (DC3). The banked amount of GHG for the second planning period has reached 394,137 t of CO_2, which is approx. three time that for the first planning period.

*Each facility is required to reduce actual emissions toward the greenhouse gas emission target amount agreed with the Tokyo Metropolitan Government. If actual emissions are reduced below the agreed amount, a part of the reductions can be saved and banked as CO_2 reduction credit.

Specified Greenhouse Gas Actual Emissions and Reduction for Fiscal Year 2019

	AT TOKYO Chuo Data Center (CC1)	AT TOKYO Chuo Data Center #2 (CC2)	AT TOKYO Data Center #3 (DC3)
Reduction rate	41%	17%	31%
Reduction	63,230t	13,623t	5,724t
Actual emissions	90,253t	66,338t	12,401t

● The target emission amount agreed with the Tokyo Metropolitan Government (TMG) is indicated as 100%. Reduction = Emission amount agreed with the TMG - Actual emissions

Total banked amount of CO_2 for CC1, CC2 and DC3

Unit [t−CO_2]

	Fiscal 2015	Fiscal 2016	Fiscal 2017	Fiscal 2018	Fiscal 2019	Total amount for the second planning period
Yearly banked amount	40,173	51,110	57,693	72,584	82,577	304,137

Reuse of Cooling Water to be Disposed of and other Environmental Considerations

The heat produced by AT TOKYO Chuo Data Center's server room is processed by cooling water being partly evaporated in a cooling tower. The inclusions of cooling water become dense due to evaporation, so density is adjusted through water supply and drainage. At this point, by reusing the cooling water/blow-down water to be disposed of via an advanced filtration device, we strive to reduce water consumption. In fiscal 2020, we successfully reused 38.7% of blow-down water. In fiscal 2021, this reuse system will also be adopted in Chuo Data Center #2 (CC2), which uses similar water-cooled air conditioning system. In addition, we are proactively taking environmental initiatives such as adding greenery to data center exterior and installing solar panels.
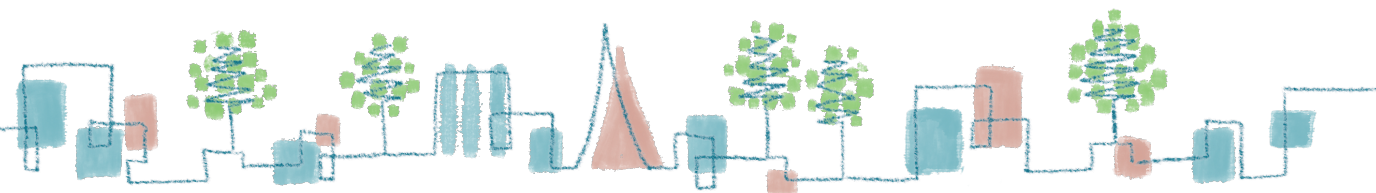

Cooling tower

Blow-down Water Reuse Rate during 2020

Average 38.7%

	April to June	July to September	October to December	January to March
Blow-down Water	7,464m³	11,108m³	10,387m³	10,769m³
Reused Water	2,714m³	3,864m³	4,488m³	4,299m³
Reuse Rate	36.4%	34.8%	43.2%	39.9%

Cooling water filtration device

INTERVIEW

Behind the scenes in AT TOKYO's environmentally friendly data centers

AT TOKYO realizes 24/365 zero downtime operation as a leading data center colocation service company, providing carrier-neutral, flexible connections. So, what does sustainability mean to AT TOKYO? Here, we introduce the voices of AT TOKYO members who are making consistent and forthright efforts toward achieving a carbon-free society through what we can do as data centers.

Reducing environmental burden through reuse of waste water from the cooling process

The key to data centers' power-saving efforts lies in how to efficiently cool IT devices. AT TOKYO's water-cooled air conditioning system circulates chilled water via chillers and cooling towers, and we reuse used cooling water that are used by the chiller plant. Water cooling requires electricity for both creating chilled water and sewage treatment of the blow-down water that is to be disposed of in the process of creating chilled water, thus imposing a burden on the natural environment. Therefore, our initiatives aimed to decrease that burden by reusing disposed water from the cooling process, especially blow-down water. The Chuo Data Center in particular consumes a lot of water, which means we reuse thousands of tons of water per month. We feel this is highly effective in reducing our environmental impact.

Masaki Chono, Manager, Facility Planning Group, Facility Operations Dept., Engineering & Services Div.

Giving new life to well-maintained UPS batteries

Our initiatives include putting UPS (Uninterruptible Power Supply) batteries whose warranty period has expired back into use as reused batteries, as well as recycling them at the time of disposal. Although such batteries are generally disposed of, AT TOKYO's UPS and batteries maintain fairly good condition as they are kept in temperature-controlled facility rooms, so we are able to reuse approx. two thirds of them in various places. Furthermore, other UPS components and batteries are separated by disposal specialists into materials such as metals and plastics for recycling.

Toru Inaba, Manager, Facility Renewal Group, Facility Maintenance Dept., Engineering & Services Div.

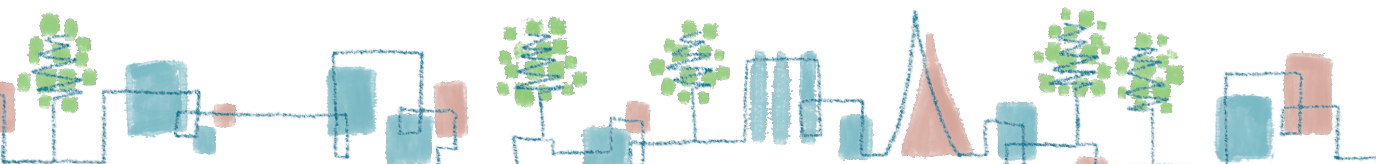## Determined to fulfill data centers' responsibilities

As the concept of SDGs makes clear, every company needs to work on environmental issues. Especially for data centers like ours that consume vast amounts of energy, reduction of environmental impact is a crucial activity. Since its foundation, AT TOKYO has made forthright efforts toward the realization of a decarbonized society and sustainability, in addition to facility energy conservation, reuse and recycling. Each and every employee is conscious of the need to effectively utilize and reuse the limited resources, which I believe is a strong foundation for our activities. We will continue to promote our environmental initiatives and strive to be environmentally friendly data centers.

Hitoshi Yokomori, Managing Executive Officer, General Manager Strategic Planning Office

AT TOKYO will continue to maintain its high awareness of energy conservation and the environment, aiming to enhance the convenience of its customers from diverse industries, while constantly striving to be the most highly evaluated data centers for each and every customer.

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