azbil

Akasaka Intercity AIR

Akasaka Intercity AIR aims to achieve the highest standards of environmental performance as a workplace, and is continually improving its operations by visualizing energy consumption trends and the operating conditions of facilities to achieve data-driven energy savings. By providing tenants with information on energy consumption trends in their individual areas, building owners and tenants can work together to promote energy-saving activities, leading to significant reductions in CO_2 emissions.

Akasaka Intercity AIR

Location:1-8-1 Akasaka, Minato-ku, Tokyo
Completed:August 2017
Overview:38 floors above ground, 3 floors below ground, 1 tower, building area 16,088.32 m², and total floor area 178,328.01 m²

With tenant participation, the goal is to conserve energy throughout the building

Akasaka, Tokyo, is home to many embassies and foreign companies. Akasaka Intercity AIR is one of the landmark buildings in the area. Completed in August 2017, it features 38 floors above ground and 3 floors below ground. It is the fifth project of Intercity, the flagship brand of large-scale mixed-use office buildings developed by Nippon Steel Kowa Real Estate Co., Ltd., whose ongoing efforts to improve the workplace environment have earned it high praise.

"In particular, from the perspective of energy conservation, we aim to be the most energy-efficient office building, and we are creating a system in which not only the building owner but also the tenants who reside there participate and contribute to the energy conservation of the entire building," says Shota Osame, Deputy General Manager of Nippon Steel Kowa Real Estate Co., Ltd.

Azbil Corporation has been involved from the construction stage onwards, handling system installation, operation, energy management, and maintenance.

"Azbil has a proven track record in areas such as automatic air conditioning control in other buildings operated by our company, and we highly value their advanced know-how and expertise in energy conservation. I believe Azbil will be an important partner in ensuring efficient energy management at Akasaka Intercity AIR," says Mr. Osame.

Use highly reliable data to implement operational improvements and resolve issues

Upon the completion of Akasaka Intercity AIR, Azbil's building management systems, savic-net™ FX2 and savic-net FX Building Management System (BMS), were installed as central monitoring systems for the air conditioning. The building is a project by Nippon Steel Kowa Real Estate that was specifically designed with particular attention given to environmental considerations. In addition to the building's large scale, the heat source for the air conditioning is provided by a district heating and cooling[*1] and cogeneration[*2] system. Furthermore, with multifaceted energy utilization in mind, the heat for the air conditioning is also shared with other facilities in the Akasaka area, resulting in an extremely complex structure. For this reason, in the first year after the building's completion, efforts were made to visualize the energy flow of the complex heat sources and to create various management standards to rationalize energy use, as required by the Energy Conservation Act[*3]. Azbil's energy management support services were used to help create these documents.

"It can be very difficult to create management standards and energy flows in-house. We were able to proceed based on Azbil's knowledge and experience from other buildings, which significantly reduced the burden on

on-site facility management staff," says Mr. Osame.

In addition, regarding building management, Azbil submits reports to the building every six months. These reports analyze operational data from equipment and other sources collected by the savic-net FX BMS to visualize energy consumption trends and equipment operating status throughout the building. They also identify issues regarding energy usage and provide solutions. Based on this information, we regularly hold CO_2 reduction meetings, which are attended by representatives from Nippon Steel Kowa Real Estate, the design company, the construction company, the facilities company, the building management company, and Azbil.

"From our respective positions with different roles, we are examining and discussing improvement measures to find optimal solutions in terms of cost performance, energy conservation, and comfort," says Toshiyuki Ohkawara, Vice General Manager of Akasaka Intercity Management Co., Ltd.

"There were many points that Azbil identified which we, or the on-site equipment staff, would never have noticed on our own," adds Mr. Osame.

Meanwhile, in terms of working with tenants to conserve energy, we introduced Azbil's tenant service (energy visualization) and created a system that allows each tenant to visualize the energy consumption trends in their own area.

"Many of our building's tenants are companies that are subject to the Energy Conservation Act and are actively engaged in environmental and energy conservation initiatives. We are often asked by companies for advice on energy conservation efforts," says Mr. Ohkawara.

With the introduction of this service for tenants, each tenant can now set the temperature in their own area and register air conditioning operation schedules from their own computer. This not only improves convenience, but also allows tenants to set their air conditioning with energy conservation in mind.

High praise from various organizations and a focus on obtaining global certification

Akasaka Intercity AIR is implementing a variety of energy-saving measures centered around these initiatives and is making steady progress in reducing the building's CO_2 emissions. In addition, these energy-saving efforts have been recognized, receiving the highest rating of S in the Wellness Office Assessment and Certification (CASBEE®)*4 in 2019, and the Minister of Economy, Trade and Industry Award in the Energy Conservation Case Study category of the Energy Conservation Grand Prize in 2020. In 2021, the company was also certified as a top-level business establishment under Tokyo's Environmental Security Ordinance.

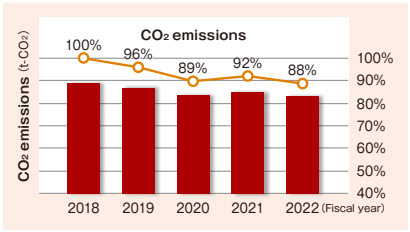
"We intend to position the efforts at this building as a model case for the Intercity Series and other office buildings we operate, and to use them in our future developments," says Mr. Osame.

"We are currently working towards obtaining LEED®*5 certification, a global green building certification program. To that end, we have high expectations for further generous support from Azbil," says Mr. Ohkawara.

A savic-net FX2 central monitoring screen in the disaster prevention center.

A tenant service screen showing the floor's air conditioning zones and temperature measurement points.

●Reduction of CO_2 emissions at Akasaka Intercity AIR



Glossary

***1 District heating and cooling**
A system in which cold water, hot water, and steam are supplied from a centrally managed heat supply facility (plant) to a group of buildings in a certain area through underground regional pipelines to provide cooling, heating, hot water, etc. to the buildings. There is no need for the receiving building to have its own heat source equipment, which is expected to result in energy savings and a reduced environmental impact.

***2 Cogeneration**
A system that generates electricity using fuels such as natural gas, oil, and LPG, while simultaneously recovering the waste heat generated during the process. The recovered waste heat can be used as steam or hot water for factory heat sources, air conditioning, heating, hot water, etc., achieving high overall energy efficiency.

***3 The Energy Conservation Law**
A Japanese law, also called the Act on the Rational Use of Energy. Depending on the amount of fuel (crude oil equivalent) consumed by factories and business establishments, Designated Energy Management Factories, both Type 1 (3,000 kl or more per year) and Type 2 (over 1,500 kl per year), are required to submit legal documents, including reports on energy usage, medium- to long-term plans, and periodic reports, and must appoint an energy manager.

***4 Wellness Office Evaluation and Certification (CASBEE)**
An evaluation system unique to Japan that targets new and existing buildings. It evaluates building specifications and initiatives that help maintain and improve the health and comfort of people working in the building. There are five levels of ranking, with S being the highest.

***5 Leadership in Energy and Environmental Design (LEED)**
An environmental performance evaluation system for buildings and communities. The system was developed by the U.S. Green Building Council (USGB) and is operated by Green Business Certification, Inc. (GBCI).

Shota Osame
Group Leader
Operations Management Group 1
Property Operation Division
Nippon Steel Kowa Real Estate Co., Ltd.

Toshiyuki Ohkawara
Vice General Manager
Facility Management Department
Building Management Department
Akasaka Intercity Management Co., Ltd.

Azbil Corporation
https://www.azbil.com/

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