

Improving Performance at a Laboratory with Advanced Energy-Saving Facilities

The daily improvement program at this laboratory adds to improved hardware performance to achieve industry-leading energy performance. Casio is striving to save even more energy by repeating the cycle of improvement, operation, results, verification, and evaluation.



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1. Dining room and rooftop green space (7F)
2. High-efficiency thermal storage tanks (yellow structure inside building)
3. Hachioji R&D Center



Cutting-edge Laboratory Saves Energy

Designed and constructed as an environmentally friendly energy-saving building in compliance with the Casio Environment Charter and the Casio Fundamental Environmental Policies, the Hachioji R&D Center was completed in November 2003.

In the design phase, building operations were simulated in a variety of tests of potential energy-saving measures. The target was to achieve a 20% reduction in energy use compared to the existing building.

● Main energy-saving measures

1. Achieving stable electricity usage over time through high-efficiency thermal storage tanks
2. Reducing need for air-conditioning with a natural ventilation system
3. Lowering wasted electricity using automated lighting controls
4. Implementing air-conditioning plans based on weather forecast data

● Energy-saving initiatives and results

In the year after the building was completed, an energy-saving study team met every month to ascertain, verify, and then apply data on energy performance. In that first year, the lab achieved a 33% decline in energy consumption in terms of equivalent CO₂ emissions and a 38% reduction in actual electrical usage, far exceeding the initial target of 20% energy savings.

This is how Casio's new energy-saving laboratory earned the highest ranking under Japan's Comprehensive Assessment System for Building Environmental Efficiency (CASBEE).

Casio Participates in the Tokyo Global Warming Alleviation Plan

Casio has submitted a plan to cut CO₂ emissions by 10.4% (347 tons) by fiscal 2010 (compared to fiscal 2005), and is now working to achieve this goal.

● Steps being taken to reduce emissions

Daily cuts are reflected in monthly reduction figures, which ultimately lead to lower annual emissions. Casio has a daily improvement mindset when it comes to continuous improvement. A few of the steps being taken are:

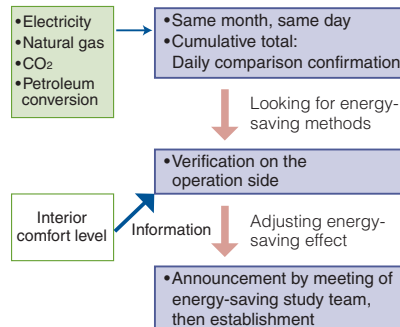
1. Setting all thermostats at 28°C in the summer (Cool Biz program)
 2. Installing sensor lighting for outdoor parking lots
 3. Reducing power used for air-conditioning through longer use of natural ventilation
 4. Reducing fan use through semi-automatic air conditioning operations on each floor
 5. Turning off excess lighting indoors and out
- Over ten such measures have been implemented.

● Reduction effect

The reduction effect as of fiscal 2007 was a CO₂ emissions reduction of 17.9% (597 tons).

Daily data management

Two years prior, previous year, and fiscal 2006



Daily operations (Operational improvement activities)

"The city of Tokyo and the Energy Conservation Technology Study Group gave their approval to our initiatives, which involve continual small daily improvements rather than energy-saving measures that rely on installing new hardware. As a result, the Hachioji R&D Center was put forward as a model office. Fiscal 2008 is the interim reporting year for formal evaluation of the results of our plan. We are working hard with the aim of achieving the highest evaluation."

Employee Pride

It was a fulfilling experience for me to plan what to include on this page.

Kiyoshi Kazama
Manager
General Affairs Division
Hachioji R&D Center



● Hachioji R&D Center (photos)
● Milestones of the Energy-saving Program at the Casio Hachioji R&D Center



● CO₂ Reduction
● CO₂ Reduction Effect, by Floor Space
● Power Consumption Savings per Square Meter