

Implementation Plan for Minimizing Greenhouse Gas Emissions  
at Okinawa Institute of Science and Technology School Corporation

July 31, 2017  
Approved

Based on the objectives of the “Action Plan for Greenhouse Gas Emission Reduction in Government Operations” (cabinet approval on March 30, 2007. Hereinafter referred to as the “Cabinet Approval”), the Okinawa Institute of Science and Technology School Corporation (hereinafter referred to as the “School Corporation”) stipulates its Implementation Plan for Minimizing Greenhouse Gas Emissions as follows.

1. Operations subject to the Implementation Plan

This Implementation Plan applies to all operations conducted by the School Corporation in principle.

2. Period subject to the Implementation Plan

This Implementation Plan covers the period from the time of its formulation to FY 2020.

3. Measures to be conducted

(1) Considerations for purchasing and using goods and services

1) Considerations for procurement

- While also considering economic efficiency, contracts should account for elements beyond price to minimize greenhouse gas emissions,
- At the internal Supply Store, prioritize selling environmentally friendly stationaries and other goods that minimize greenhouse gas emissions.
- Encourage vendors to refrain from using plastic bags and disposable containers.
- Purchase re-fillable consumables including stationaries and detergent as much as possible.

2) Efficient use of OIST fleet vehicles

- Ensure thorough management of each OIST fleet vehicle for efficient operation.
- Introduce reduced-pollution vehicles when replacing OIST fleet vehicles.

3) Introduction of energy-saving equipment

- Choose energy-saving equipment as much as possible when replacing or purchasing new computers, copying machines, and other office automation equipment, electric refrigerators and other appliances, lights, and other equipment.

4) Reduction of paper use

- Simplify meeting documents, print both sides of paper, and re-use paper printed on one side.

- Encourage use of e-mails and intranet.
- 5) Use of recycled paper
- Encourage using recycled paper for copy paper, toilet paper, etc.
- 6) Purchase and use of products with HFC alternatives
- When purchasing refrigerators, air conditioners, and similar equipment, strive to introduce products with HFC alternatives, or HFC products with relatively small impact on global warming.
- (2) Considerations for construction and management of facilities
- 1) Implementation of thorough energy-saving measures for facility construction
- Implement thorough energy saving measures for new facility construction in order to minimize greenhouse gas emissions, including designing facilities that account for the intense sunlight of Okinawa and favor LED lighting.
  - Increase the thermal insulation performance of facilities by adopting the exterior thermal insulation method by using ceramic tiles on roofs and exterior walls . Windows also have large impact on the insulation performance of the facilities. Reduce air conditioning load by blocking direct sunlight to windows with large exterior eaves and blinds.
  - Promote use of construction materials without HFCs while considering also safety, economic efficiency, energy efficiency, and insulation performance.
  - Consider introducing natural gas co-generation.
- 2) Implementation of thorough energy-saving measures for existing facilities
- To reduce energy consumption of research activities, further promote shared/common use of research facilities and equipment to increase the utilization efficiency.
  - To reduce energy consumption, continue measures such as use of solar panels, adjusting ventilation frequency in facilities, and simultaneous lights-out in facilities at a programmed time, as well as monitor the status of energy use.
  - Further promote the use of the heat accumulation system with ice, which leads to the reduction of peak power demand.
  - Shorten the response time of motion detectors for lights and toilets, thin-out the illumination in common space, and turn off lights during daytime to make use of sun light.
  - Regularly hold Energy Saving Promotion Management Committee meetings to ensure steady implementation of this Implementation Plan and develop annual action plans for saving energy. As a follow-up to the implementation, the Committee evaluates and reviews the efforts. The Committee also reports the results at internal meetings to keep the community informed and encouraged for further improvement.
- 3) Proper cooling/heating management
- Continue to properly manage cooling/heating while ensuring safety and smooth implementation of research projects.

- Experiments to promote hourly scheduling according to the hourly usage of rooms.
- Raise the preset room temperature within acceptable limits, except for the special cases when non-stop air conditioning is required for research.
- Encourage wearing light attire (e.g., Kariyushi wear) in summer.

(3) Considerations for minimizing greenhouse gas emissions in other operations

- Ensure waste separation by positioning waste collection boxes by category in suitable locations.
- Ensure used product collection for return to vendors, e.g., toner cartridges for copying machines and printers.

(4) Providing information to employees

- Inform employees on environmental considerations through intranet and other means.

4. Notes

The mid-term goals approved by the Cabinet in May 2015 are to “reduce greenhouse gas emissions 3.8% below 2005 levels by 2020,” and to “reduce greenhouse gas emissions 26% below 2013 levels by 2030.” OIST SC was established in November 2011, and additional facilities are still under construction. Therefore, the goals approved by the Cabinet are not applicable for us to follow in setting our goals. We will construct facilities with latest energy-saving designs and monitor greenhouse gas emissions. Based on data monitoring, we will strive to minimize greenhouse gas emissions while avoiding obstacles to research equipment operations. More specifically, our objective is to reduce the emissions by 10% or more during the five years from FY2015 to FY2020. The CO<sub>2</sub> emissions intensity of FY2015 is taken as the standard value because that year marks the completion of Phase 1 in campus construction with the commencement of Lab 3 operation.