Attachment ②

June 13, 2018
Environment and Energy Saving Committee

Energy Saving Action Plan for AY 2018 of the University of Tsukuba
Digest Version

I. Basic Directions

The action plan will be realistically implemented circumventing effects on education, research, medical, and other activities as much as possible with careful attention to the health and safety of students, pupils, children, faculty members, and employees (hereinafter referred to as "students, faculty members, and employees").

II. Implementation Period and Target Facilities

From July 1, 2018 to March 31, 2019 at all facilities of the university excluding employee housing

III. Energy Saving Numerical Goal

The **goal is to reduce electricity and gas use (for air-conditioning) by 1.6%** from the previous academic year.

IV. Concrete Contents of the Energy Saving Initiatives

A. Initiatives of the University

1. Transmit information on the real-time electricity use by TEMS and keep everyone informed about energy saving through the website, e-mail, posters, etc.
2. Perform walk-around checks regularly and provide information to concerned departments.
3. Encourage energy saving promotion initiatives by students, provide energy saving awareness to students, and enable them to address energy saving at their own initiative.
4. Provide information on electricity use to concerned departments and ensure to keep everyone informed about energy saving by reporting to faculty meetings, etc.
5. When updating equipment, etc., update to highly efficient equipment to the extent possible.
6. Turn off the lights during lunch break and after working hours, turn off the power of unused office automation equipment, laboratory equipment, etc., and promote the reduction of electricity use.

B. Initiatives in Lights

1. Turn off the lights during lunch breaks, etc. except in places necessary to operation, education, and research. Ensure to turn off the lights at night except only to the minimum possible extent in places necessary to operation and safety.
2. Wipe dirty lamps or covers of light fixtures.

3. For outdoor lighting of outdoor fitness facilities (baseball field, athletics track field, etc.), ensure to have less lighting time by adjusting the operation hours.

C. Initiatives in Air-Conditioning

1. Ensure appropriate control of indoor cooling and heating temperatures (set air conditioner at 28℃ and heater at 19℃). Or use a circulator and ensure to even out the indoor temperature.
2. If continuous operation is necessary under special circumstances including experiments and research, ensure appropriate operation by adjusting the thermostat to the extent allowable and operate by bringing in outdoor air by ventilation in winter months and the outdoor temperature is cold.
3. Clean air conditioner indoor unit filters to the extent possible.
4. With sunlight coming in from the window, block out the light in moderation by using blinds and curtains. Ensure measures for cooling and heating to become effective by not leaving the windows and doors open with the air-conditioning turned on.

D. Initiatives in Office Automation Equipment

1. Switch to power saving mode of PCs, printers, copy machines, etc. and consolidate the number of units in operation. Or ensure the reduction of standby electricity by power discontinuity of TVs.
2. Ensure the power saving mode of refrigerators, electric pots, etc. and consolidate the number of units in operation.
3. Pay attention to the installation location of equipment and ensure effective exhaust heat.
4. If there is grit and dust in the exhaust unit, ensure effective exhaust heat by cleaning it.

E. Initiatives in Educational and Research Equipment

1. Departments that have large experimental equipment will communicate with the department for energy management and adjust the operation.
2. For equipment that needs to be maintained by another equipment, keep the efficient operation of equipment by conducting maintenance at regular intervals.
3. Give consideration to the installation location so that the exhaust heat of the freezer, etc. may not accumulate around the equipment. Pay attention to the thermostat so that the equipment may not overdrive.
4. For equipment that use continuous power (deep freezers, constant-temperature baths, refrigerators for pharmaceutical control, etc.), reduce the number of units in operation by consolidation to the extent possible.
5. For aging experimental equipment, consider renewal. For renewed or newly-built equipment, acquire energy saving equipment, etc. to the extent possible.
6. For equipment that requires a measurable amount of power, avoid daytime use on weekdays during the summer and nighttime use on

weekdays during the winter.

7. For fume hoods that open, close or open at a minimum when out of the office.

F. Other Initiatives

1. Enforce cool biz and warm biz and reduce the electricity consumed in air-conditioning.
2. Reduce the use of elevators and take the stairs including the two-up three-down program.
3. Turn off the heated toilet seat during the summer, turn down the thermostat during the winter, and put down the toilet seat lid after use.
4. Ensure to lock the room when not in use for a long period.
5. For equipment with filters, etc. including vacuums, exhaust fans, and experiment devices, get the filters, etc. clean and try not to operate when clogged.
6. Conserve water by properly using it and avoid wasting it.

Ⅴ. Validation of Initiatives

Hearings on energy saving were implemented and comments of promotion committee members for energy saving were reflected into future plans.

Ⅵ. Follow-Up

For this plan, a review, etc. of the initiatives was conducted and reported to an on-campus meeting and got across to students, faculty members, and employees.