

OUR ENVIRONMENT



To strengthen our commitment to manage our impact on the environment by prioritising strict adherence to environmental regulations governing waste and by improving our energy performance.

WASTE MANAGEMENT

According to the World Health Organization, about 85 per cent of the total amount of waste generated by healthcare activities is general, non-hazardous waste, comparable to domestic waste. The remaining 15 per cent is considered hazardous material that may be infectious, chemical or radioactive. The treatment and disposal of healthcare waste may pose health risks indirectly through the release of pathogens and toxic pollutants into the environment.

IHH prioritises the management of healthcare waste, and the hospitals have developed strategies and systems along with strong oversight and regulation to incrementally improve waste segregation, destruction and disposal practices. This is done with the ultimate aim of meeting national and international standards.

Much of the concern around environmental compliance in healthcare, which has been reiterated by the Basel Convention¹, is regarding the impact of hazardous or scheduled waste generated

by the hospitals in the surrounding environment. In Malaysia, Singapore, Turkey and India, hospitals are expected to follow environmental regulations as enacted by national or regional law. This compliance is also important to maintain accreditations, such as Joint Commission International accreditation.

1. The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal is an international treaty aiming to protect human health and the environment against the adverse effects of hazardous wastes.

TURKEY: CASE STUDY

In Turkey, hospitals are required to comply with the following environmental regulations:

- Environmental Permits and Licenses Regulation
- Environmental Impact Assessment Regulation
- Waste Management Regulation
- Medical Wastes Control Regulation
- Vegetable Oil Wastes Control Regulation
- Packaging Wastes Control Regulation
- Oil Wastes Control Regulation
- Regulation on Highway Transportation of Hazardous Substances
- Waste Batteries and Accumulators Control Regulation
- Environmental Noise Assessment and Management Regulation
- Water Pollution Control Regulation
- Regulation on Control of Air Pollution Caused by Heat
- Regulation on Control of Air Pollution Caused by Industry

The audits conducted by the official authorities listed below on Acibadem hospitals in 2018 showed that there was no case of non-compliance regarding waste management or other environmental permits and, as a result, no penalties were imposed.

- Provincial Directorate of Environment connected to the Ministry of Environment
- Provincial Directorate of Health connected to the Ministry of Health
- Ministry of Transportation Regional Directorates

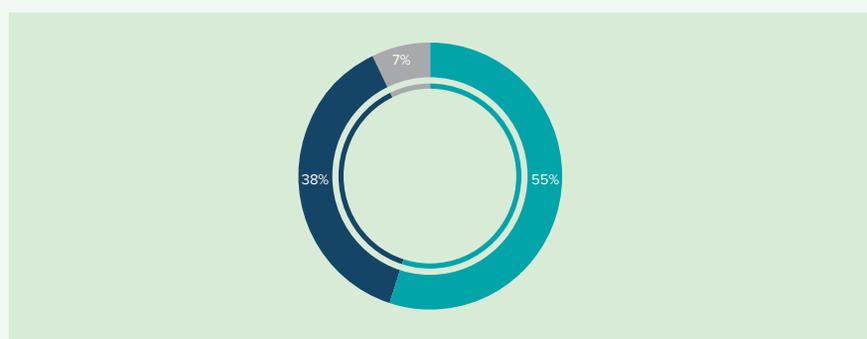
Waste generated from the various operations of Acibadem hospitals are classified under three main types – hazardous, infectious and non-hazardous waste. Based on the total waste that was generated by Acibadem hospitals from January to July 2018, the figure below represents the percentage breakdown of the three categories of waste.

In Acibadem's waste management policy, reducing waste is a priority. As part of the medical waste reduction

project, which started at the end of May, the types of wastes produced in the hospitals and their appropriate separation were studied. Medical wastes were labelled with the name of the units they were produced in and were investigated separately. Periodic site audits were performed to avoid disposing non-infectious waste into medical waste containers. The amount of medical waste was controlled at all times but, when a sudden increase occurred, we investigated the cause and immediately implemented mitigation measures. As a result of these efforts, we saw a 20 per cent reduction in medical waste in June 2018, compared to that of May. The medical waste generated by the hospitals reduced from 217.6 tonnes in May to 174.7 tonnes in June.

TYPE OF WASTE GENERATED (JAN–JUL 2018)

■ Non-Hazardous Waste ■ Infectious Waste ■ Hazardous Waste



The table below describes the different disposal methods and the amount of waste generated by Acibadem hospitals, medical centres and other facilities from January to July 2018.

Type of Waste	Amount of Waste (Tonnes)	Description	Disposal Method
Non-hazardous Waste	2,203.0	Domestic Waste	Domestic waste is collected by the municipality to be taken to domestic waste collection centres.
		Packaging Waste	Paper, cardboard, plastic, glass and metal packaging wastes are collected by licensed recycling companies which are contracted by the municipality to be processed for recycling.

Sustainability

OUR ENVIRONMENT

Type of Waste	Amount of Waste (Tonnes)	Description	Disposal Method		
Hazardous Waste	282.6	Battery Waste	Delivered to the Portable Battery Producers and Exporters Association.		
		Accumulator Waste	Delivered to related licensed companies regarding their contents.		
		Electronic Waste	Delivered to licensed companies that separate the recyclable parts and apply necessary processes for recycling.		
		Cytotoxic Waste Pharmaceutical Waste Laboratory Liquid Waste Contaminated Packaging Waste Autoclave Waste Fluorescent Lamp Waste Absorbent materials contaminated with hazardous substances Paint Waste Anti-freeze Waste Grease Filters Waste	Delivered to licensed companies for disposal by incineration.		
		Mineral Oil Waste Vegetable Oil Waste	Delivered to licensed companies for recycling.		
		Infectious Waste	1,546.7	Medical Waste	Delivered to the city's licensed company to be sent to sterilisation or incineration facilities.

ENERGY EFFICIENCY

IHH hospitals are increasingly becoming a global destination for medical and patient care, and there is a corresponding growth of infrastructure to support the industry, which inevitably results in an increase in energy consumption. The scope of introducing energy efficiency in a hospital involves creating a robust energy-saving programme that factors in,

among others, the capacity of the building, the need for them to function 24 hours a day throughout the year and the careful control of the internal climate. In practice, energy efficiency is salient to our efforts to strengthen the performance of our hospitals in the context of environmental sustainability. However, medical considerations remain the top priority.

Across the different home markets, we have taken active measures to improve the energy efficiency of our hospitals and buildings, including but not limited to using state-of-the-art technology, switching to LED lighting, upgrading heating, ventilation and air-conditioning (HVAC) systems, renewing high energy consuming equipment and optimising operational system controls.

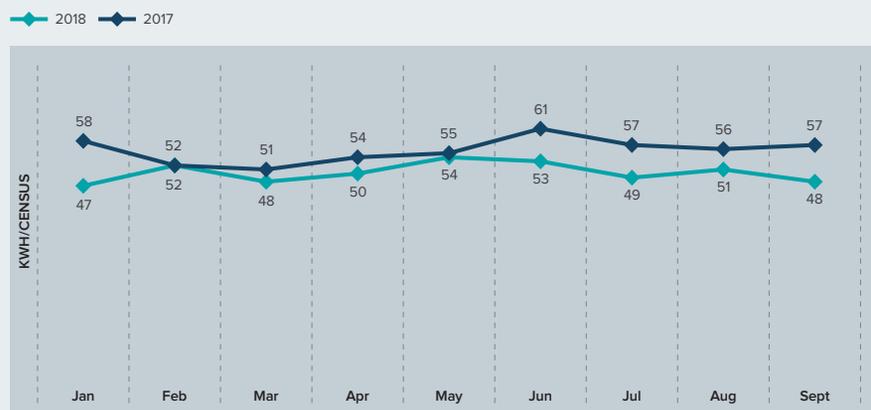
MALAYSIA: CASE STUDY

In Malaysia, all 14 hospitals have been practising a range of energy saving practices in areas including the front office, management office, IT office, facility room, housekeeping station, ward, nursery, accident and emergency department (A&E), operating theatre, intensive care unit (ICU) and the central sterile services department (CSSD), as well as using modality equipment for imaging and health screening. Without compromising the safety and security of our patients and staff, we have been successfully practising the following:

- Switching off televisions, computers and room lights when not in use.
- Turning off air-conditioning in empty patient rooms and, where possible, after office hours.
- Switching off modality machines, except the General X-Ray machine, when not in use.
- Creating awareness amongst staff on Energy Saving Management.

Our initiatives include upgrading or replacing HVAC and chillers. In 2018, the existing HVAC of Pantai Hospital Penang and Pantai Hospital Ampang was upgraded and fine-tuned for considerable energy and CO₂ savings, reduced costs and improvements to the working environment. Also, within the reporting period, two chillers in Gleneagles Kuala Lumpur (Block A) and three in Gleneagles Penang (Block B) were replaced with newer, efficient chillers. The prospective savings in electricity

ENERGY INTENSITY 2017 VS 2018



consumption and cost per year when comparing the chiller efficiency (kW/RT¹) of one new chiller unit to an old chiller unit are 193,093.7 kWh and RM 55,944.65 respectively.

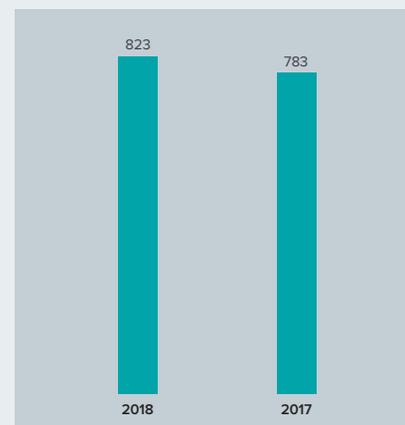
Monitoring and tracking energy consumption is the first step in controlling and conserving energy in the hospital buildings. Recording the data on a monthly basis has helped to identify energy saving opportunities and has provided an estimate on how much energy each opportunity can save.

As a result of our energy saving initiatives, we saw a 10 per cent reduction in energy intensity from January to September 2018, when compared to 2017. The energy intensity of our operations is a better representation of the energy consumed as it is relative to the patient census.

The total electricity consumption from January to September 2018 was five per cent higher compared to that of 2017. The increase was attributed to the opening of Gleneagles Kuala Lumpur (Block B) in 2018, which accounted for four per cent of the 2018 consumption and the 17 per cent increase in the 2018 patient census.

TOTAL CONSUMPTION JAN–SEPT 2018

(kwh x 100,000)



1. Chiller Efficiency = Chiller compressor power consumption (kW)/Refrigeration tonnage (RT)