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DEPARTMENT OF HEALTH

Emerald Sustainability Jawda Guidance

Version 3

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1. Executive Summary

The DOH Health Facility Guidelines for Emerald Sustainability Index is focussed on sustainability and green building initiatives specifically for healthcare.

Abu Dhabi construction industry is already covered by the requirement of Estidama. However, these requirements are not healthcare-specific. Part S of the DOH Guidelines should be seen as complementary to Estidama and a natural extension of the other components of the Guidelines.

It is hoped that through the Emerald Sustainability Index, the Healthcare Industry will introduce initiatives and features that will put the healthcare facilities at the forefront of innovation in sustainability.

The DOH approvals will indicate the level of Sustainability achieved. Dimensions must reflect performance across the 3 pillars prioritized under DoH's sustainability goals to achieve net zero.

The guidance sets out the full definition and method of calculation for Emerald Sustainability Index - Measure Cards.

For enquiries about this guidance, please contact jawda@doh.gov.ae

This document is subject for review and therefore it is advisable to utilize online versions available on the DOH website at all times.

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2. Introduction

2.1. The Department of Health– Abu Dhabi (DOH) is the regulative body of the Healthcare Sector in the Emirate of Abu Dhabi and ensures excellence in Healthcare for the community by monitoring the health status of the population. DOH is mandated:

- To achieve the highest standards in health curative, preventative and medical services and health insurance in the Emirate.
- To lay down the strategies, policies and plans, including future projects and extensions for the health sector in the Emirate, and to follow-up their implementation
- To apply the laws, rules, regulations and policies which are issued as they are related to its purposes and responsibilities, in addition to what is issued by the respective international and regional organizations in line with the development of the health sector.
- To follow up and monitor the operation of the health sectors, to achieve and exemplary Standard in the provision of health, curative, preventive and medicinal services and health insurance

2.2. DOH defines the strategy for the health system, monitors and analyses the health status of the population and performance of the system. In addition, DOH shapes the regulatory framework for the health system, inspects against regulations, enforce standards, and encourages adoption of world – class best practices and performance targets by all healthcare service providers in the Emirate of Abu Dhabi.

2.3. DOH also drives programs to increase awareness and adoption of healthy living standards among the residents of the Emirate of Abu Dhabi in addition to regulating scope of services, premiums and reimbursement rates of the health system in the Emirate of Abu Dhabi.

2.4. The Health System of the Emirate of Abu Dhabi is comprehensive, encompassing the full spectrum of health services and is accessible to all residents of Abu Dhabi. The system is driven towards excellence through continuous outcome improvement culture and monitoring achievement of specified indicators. Providers of health services are independent. Predominately private and follow highest international quality standards. The system is financed through mandatory health insurance.

In doing so DOH will:

- Drive structure, process and outcome improvements across health sector
- Put people first and champion their rights
- Focus on quality and act swiftly to eliminate poor quality of care
- Work with Stakeholders and apply fair processes.
- Gather information and utilize knowledge and expertise to improve care.
- Link the care to payment in a way that results in a continuous improvement and maximize the value of the care provided in Abu Dhabi.

3. Planning for data collection and submission

In planning for data collection and submission Healthcare must adhere to reporting, definition and calculation requirements as set out in this guidance. Healthcare providers must also consider the following:

- Nominate responsible data collection and quality leads(s).
- Ensure data collection leads are adequately skilled and resourced.
- Understand and identify what data is required, how it will be collected (sources) and when it will be collected.
- Create a data collection plan.
- Ensure adequate data collection systems and tools are in place.
- Maintain accurate and reliable data collection methodology.
- Data collation, cleansing and analysis for reliability and accuracy.
- Back up and protect data integrity.
- Have in place a data checklist before submission.
- Submit data on time and ensure validity.
- Review and feedback data findings to the respective teams in order to promote performance improvement.
- Failing to submit valid data will be in breach of the licensing condition and could result in fines being applied, penalties associated with performance or revoke of license.
- When needed, documentation and tracks will be provided instantly to DOH, or their representative, to assure DOH that all dues processes are being followed in collecting, analyzing, validating and submitting your performance

4. About this Guidance

Emerald Sustainability Index

This guidance sets out to contribute to a healthier environment by implementing Sustainability Standards without compromising healthcare principles and concerns.
The guidance sets out the definitions, parameters and frequency by which JAWDA Quality indicators will be measured and submitted to DOH and will ensure Healthcare Providers provide safe, effective and high-quality services.

Q. Who is this guidance for?

All DOH Licensed General and Specialist Hospitals in the Emirate of Abu Dhabi

Q. How do I follow this guidance?

Each Hospital will nominate one member of staff to coordinate, collect, quality control, monitor and report relevant data as per communicated dates. The nominated healthcare facility lead must in the first instance e-mail their contact details (if different from previous submission) to JAWDA@doh.gov.ae and submit the required annual quality performance indicators through Online Portal.

Q. What are the Regulation related to this guidance?

Legislation establishing the Health Sector
This Emerald Sustainability guidance is in accordance with the requirements set out in the DOH Health Facility Guidelines 2022 Part S – Sustainability.

Type: Core Indicator **Indicator Number: E001**

KPI Description (title):	**Annual Energy Consumption Per Patients Covered**
Dimension	Operations
Definition:	For the local standardization of energy consumption, we refer specifically to ***electricity***. This is applied by tracking an organization's total electricity use, including both ***cooling and non-cooling load***s, relative to its operations. **Note:** All energy values must be converted into megawatt-hours (MWh) for calculation purposes, and all unit conversion factors must be clearly referenced for audit and verification. Report values up to a minimum of two decimal places without rounding to whole numbers
Calculation:	***Numerator***: Total Energy consumption (megawatt hours [MWh]) ***Numerator Inclusion:*** • Cooling electricity consumption • non-cooling electricity consumption • all electricity consumption from solar energy ***Numerator Exclusion:*** estimated readings from gasoline, diesel, and natural gas ***Denominator***: Total number of encounters in the facility premises *Denominator Guidance:* *Report separately OUTPATIENT and INPATIENT encounters* A) Outpatient: all OPD visits including face-to-face visits, diagnostics, virtual visit, ED, daycase B) Inpatient discharges: includes inpatient acute care, long-term care, post-acute rehabilitation
Reporting Frequency:	Annual
Unit of Measure:	Megawatt hours [MWh] Per encounters
International comparison if available	• Subject Matter Expert (SME) recommendation in alignment with Geneva Sustainability Center (source not included) • Subject Matter Expert (SME) recommendation, citing ENERGY STAR Score for Hospitals in the United States (source not included), 2021
Desired direction:	Lower the better
	Notes for all providers
Data sources and guidance:	• DOH Health Facility Guidelines 2022 Part S – Sustainability • Energy consumption data must be collected from monthly utility records provided by AADC, ADDC, TAQA, Tabreed (cooling system), or any relevant sources or grid supplier, ensuring that readings reflect actual consumption dates rather than bill issue dates.

Type: Core Indicator **Indicator Number:** E002

KPI Description (title):	**Percent of Renewable Energy**
Dimension	Operations
Definition:	Organization's effort to reduce its use of non-renewable energy. ***Renewable energy*** is energy derived from natural sources that are replenished at a higher rate than they are consumed. For the local standardization of renewable energy in Abu Dhabi, we refer specifically to ***SOLAR ENERGY from onsite PV panels***. **Note:** All energy values must be converted into megawatt-hours (MWh) for calculation purposes, and all unit conversion factors must be clearly referenced for audit and verification. Report values up to a minimum of two decimal places without rounding to whole numbers
Calculation:	***Numerator***: Total annual MWh generated from renewable sources, whether obtained from the grid or produced on site. ***Numerator Guidance***: along with solar energy renewable source, include purchased renewable energy (e.g., Green Power or Renewable Energy Certificates), if applicable. ***Denominator***: Total annual energy consumption of the facility measured in megawatt-hours (MWh).
Reporting Frequency:	Annual
Unit of Measure:	Percentage
International comparison if available	• Subject Matter Expert (SME) recommendation in alignment with Geneva Sustainability Center (source not included)
Desired direction:	Higher the better
	Notes for all providers
Data sources and guidance:	• DOH Health Facility Guidelines 2022 Part S – Sustainability • Renewable energy production data from smart metering systems or dedicated metered devices. • Energy consumption data must be collected from monthly utility records provided by AADC, ADDC, TAQA, Tabreed (cooling system), or any relevant sources or grid supplier, ensuring that readings reflect actual consumption dates rather than bill issue dates. • Abu Dhabi Department of Energy – Clean Energy Certificates Regulatory Policy

Type: Core Indicator **Indicator Number:** E003

KPI Description (title):	**Annual Carbon Emissions Per Patients Covered**
Dimension	Operations
Definition:	A measure of an organization's greenhouse gas (GHG) emissions across all scopes, in accordance with the Greenhouse Gas Protocol standards (ghg-protocol-revised.pdf) • **Scope 1 Emissions:** These include direct GHG emissions from owned or controlled sources. Facility direct emissions that contribute to greenhouse gas emission, For example emissions from stationary combustion, mobile combustion, fugitive releases from refrigerants and fire suppression systems, volatile anaesthetic agents, medical gases, and on-site waste treatment activities • **Scope 2 Emissions:** These represent indirect emissions from the consumption of purchased electricity, heating, cooling, or steam. Emission factors must be obtained from the relevant grid supplier. Inclusion of of Scope 2: **Location-based:** Uses average emission factors for the grid where the energy was consumed. **AND** **Market-based (if applicable)**: Uses emission factors based on contractual instruments (e.g., clean energy certificates). • **Scope 3 Emissions:** Calculated in line with the Greenhouse Gas Protocol Scope 3 Guidance. These represent all other indirect emissions resulting from organizational activities not included in Scopes 1 and 2. ***(Temporary suspension of Scope 3 data submission)*** **Note:** Report values up to a minimum of two decimal places without rounding to whole numbers
Calculation:	***Numerator***: Total annual carbon emissions per scope of the Greenhouse Gas Protocol measured in tCO2eq (metric tons) *Report Separately each scope*: a) Scope 1 (Direct) GHG emissions b) Scope 2 (Energy indirect) emissions. (Use updated year **TAQA UAE Emission Factor** as common Emission factor for calculation currently published in TAQA website: Announcements – TAQA) ***Denominator***: Annual Total number of inpatient discharges from the facility premises (includes inpatient acute care, long-term care, post-acute rehabilitation).
Reporting Frequency:	Annual
Unit of Measure:	tCO2eq per discharges

International comparison if available	• World Resources Institute & World Business Council for Sustainable Development. (2004). The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition) • Subject Matter Expert (SME) recommendation in alignment with Geneva Sustainability Center (source not included)
Desired direction:	Lower the better
Notes for all providers	
Data sources and guidance:	• DOH Health Facility Guidelines 2022 Part S – Sustainability • Abu Dhabi Department of Energy – Clean Energy Certificates Regulatory Policy • TAQA – Official Announcements Webpage • Emirates Water and Electricity Company (EWEC) – Clean Energy Certificates Webpage

Type: Core Indicator **Indicator Number:** E004

KPI Description (title):	**Percent of Virtual Patient Visits**
Dimension	Operations
Definition:	Organization's efforts to reduce its carbon intensity by implementing telehealth initiatives
Calculation:	***Numerator***: Annual number of virtual visits, including phone consultations. Telehealth procedure codes: 99441, 99442, 99443, 99446, 99447, 99448, 99449, 01-01, 01-02, 01-03, 01-04 ***Denominator***: Annual number of outpatient encounters (including face-to-face OP visit, diagnostics, virtual visits, ED, daycase)
Reporting Frequency:	Annual
Unit of Measure:	Percentage
International comparison if available	• Subject Matter Expert (SME) recommendation in alignment with Geneva Sustainability Center (source not included)
Desired direction:	Higher is Better
Notes for all providers	
Data sources and guidance:	• DOH Health Facility Guidelines 2022 Part S – Sustainability

Type: Core Indicator **Indicator Number:** E005

KPI Description (title):	**Annual Energy Consumption Per Square Metre**
Dimension	Operations
Definition:	**Energy Use Intensity (EUI)** is a metric used to assess the energy efficiency of a building. It represents the building's metered annual energy consumption and enables comparison of energy performance across facilities of similar type and function. EUI is calculated by dividing the total annual energy consumed including electricity for ***cooling*** and ***non-cooling*** purposes by the building's total *conditioned floor area.* For the local standardization of energy consumption, we refer specifically to ***electricity***. Gas consumption where boiler/kitchen are in use are excluded. *Conditioned floor area* means the sum of areas of all floors in conditioned space in the structure, including basements, cellars, and intermediate floored levels measured from the exterior faces of exterior walls or from the center line of interior walls, excluding covered walkways, open roofed-over areas, porches, exterior terraces or steps, chimneys, roof overhangs and similar features. **Note:** All energy values must be converted into megawatt-hours (MWh) for calculation purposes, and all unit conversion factors must be clearly referenced for audit and verification. Report values up to a minimum of two decimal places without rounding to whole numbers.
Calculation:	***Numerator***: Total Energy consumption (megawatt hours [MWh]) ***Numerator Inclusion:*** • Cooling electricity consumption • non-cooling electricity consumption • all electricity consumption from solar energy ***Numerator Exclusion:*** estimated readings from gasoline, diesel, and natural gas ***Denominator***: Total *Conditioned floor area* of facilities, square meters [m2], includes those directly managed by the hospital, providing support for healthcare delivery
Reporting Frequency:	Annual
Unit of Measure:	MWh/m^2
International comparison if available	• Canadian Coalition for Green Health Care. (2019). Green Hospital Scorecard Report. Green Hospital Scorecard PDF • Subject Matter Expert (SME) recommendation, citing Greenly. (n.d.). What is energy use intensity (EUI) Greenly EUI Article • Subject Matter Expert (SME) recommendation, citing ENERGY STAR Score for Hospitals in the United States (source not included), 2021

	• Subject Matter Expert (SME) recommendation, citing Health Facilities Management (HFMMagazine). (n.d.). Measuring hospital energy performance. (source not included)
Desired direction:	Lower is better
Notes for all providers	
Data sources and guidance:	• DOH Health Facility Guidelines 2022 Part S – Sustainability • Energy consumption data must be collected from monthly utility records provided by AADC, ADDC, TAQA, Tabreed (cooling system), or any relevant sources or grid supplier, ensuring that readings reflect actual consumption dates rather than bill issue dates.

Type: Core Indicator **Indicator Number:** E006

KPI Description (title):	**Annual Water Consumption Intensity Per Square Metre**
Dimension	Operations
Definition:	**Water Use Intensity (WUI)** is expressed as the hospital's annual water use relative to the total *conditioned floor area*. It is a measure that is used to determine the facility's water performance. *Conditioned floor area* means the sum of areas of all floors in conditioned space in the structure, including basements, cellars, and intermediate floored levels measured from the exterior faces of exterior walls or from the center line of interior walls, *excluding* covered walkways, open roofed-over areas, porches, exterior terraces or steps, chimneys, roof overhangs and similar features. Facility water data is collected in cubic meters (m3) and divided by the reported conditioned floor area (m2) to calculate a final WUI (m3/m2). **Note:** Report values up to a minimum of two decimal places without rounding to whole numbers
Calculation:	***Numerator***: Total annual water consumption, measured in cubic meters [m^3] ***Denominator***: The total *Conditioned floor area* of facilities, measured in square meters (m2), includes those directly managed by the hospital, providing support for healthcare delivery ***Denominator Exclusion***: recycled water supplied by the municipality for landscaping purposes
Reporting Frequency:	Annual
Unit of Measure:	m^3/m^2
International comparison if available	• NHS England. (2021). Health Technical Memorandum 07-04: Water management and water efficiency. • Canadian Coalition for Green Health Care. (2019). Green Hospital Scorecard Report. Green Hospital Scorecard PDF • Subject Matter Expert (SME) recommendation, citing: Law Insider. (n.d.). Conditioned floor area (source not included) • Subject Matter Expert (SME) recommendation, citing: Victoria State Government, Department of Health. (n.d.). Reducing water use at healthcare facilities (source not included).
Desired direction:	Lower is better
	Notes for all providers
Data sources and guidance:	• DOH Health Facility Guidelines 2022 Part S – Sustainability • Energy consumption data must be collected from monthly utility records provided by AADC, ADDC, TAQA, Tabreed (cooling system), or any relevant sources or grid supplier, ensuring that readings reflect actual consumption dates rather than bill issue dates.

Type: Core Indicator **Indicator Number:** E008

KPI Description (title):	**Percent of Employees Trained in Environmental and Social Drivers of Health**
Dimension	Infrastructure
Definition:	Organization's actions to raise awareness on environmental and social health drivers among employees
Calculation:	***Numerator***: Annual number of unique staff trained on environmental and social drivers of health *Numerator Guidance*: Amount of full-time equivalent staff who have undergone training sessions, aimed at learning how environmental and social factors determine the health of the population the hospital serves (for example, educating on air pollution is causing respiratory and chronic diseases). Social determinants of health (SDOH) are the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks. ***Measured per employee trained, regardless of the number of times they took the training*** ***Denominator***: Total Employees providing services at the facility site. Denominator inclusion: all staff (full time and contracted / part time) for • medical staff • non-medical staff
Reporting Frequency:	Annual
Unit of Measure:	Percentage
International comparison if available	• Subject Matter Expert (SME) recommendation in alignment with Geneva Sustainability Center (source not included) • Subject Matter Expert (SME) recommendation, citing: Anthem. (n.d.). Social drivers of health and how they affect you (source not included).
Desired direction:	Higher is better
Notes for all providers	
Data sources and guidance:	• DOH Health Facility Guidelines 2022 Part S – Sustainability • Abu Dhabi Occupational Safety and Health System • All relevant training attendance records, training materials, and applied calculation assumptions must be documented

Type: Core Indicator **Indicator Number:** E009

KPI Description (title):	**Percent of Employees Trained in Climate Change or Sustainability**
Dimension	Infrastructure
Definition:	Extent to which medical and non-medical staff are trained on the relationship between climate/environment and human health conditions/illnesses/diseases Geneva Sustainability Masterclass: An in-person, one-day learning programme which will allow to hone hospital leaders' competencies and provide key information and tools to assess, plan and address the required organizational changes.
Calculation:	***Numerator***: Annual number of unique staff trained on climate change or sustainability (Amount of full-time equivalent staff who have undergone training sessions, aimed at learning about the relation between climate change and human health, the contribution of the healthcare sector, and the role of healthcare leaders and professionals as climate leaders. ***Measured per employee trained, regardless of the number of times they took the training***) ***Inclusion***: can be Attendance Certificate of Healthcare Providers in Geneva Sustainability Masterclasses OR other trainings. ***Denominator***: Total Employees providing services at the facility site. ***Denominator inclusion***: all staff (full time and contracted / part time) for • medical staff • non-medical staff
Reporting Frequency:	Annual
Unit of Measure:	Number of employees
International comparison if available	• Subject Matter Expert (SME) recommendation in alignment with Geneva Sustainability Center (source not included) • Subject Matter Expert (SME) recommendation, citing: Green Business Bureau. (n.d.). Corporate sustainability training: An executive guide (source not included).
Desired direction:	Higher is better
Notes for all providers	
Data sources and guidance:	• DOH Health Facility Guidelines 2022 Part S – Sustainability • All relevant training attendance records, training materials, and applied calculation assumptions must be documented

Type: Core Indicator **Indicator Number:** E010

KPI Description (title):	**Energy Efficient Schemes Costs**
Dimension	Operations
Definition:	Annual amount of all capital (not revenue) invested in energy efficiency projects/programs
Calculation:	***Numerator***: Annual amount of all capital (not revenue) invested in energy efficiency projects /programmes ***Numerator Inclusions***: • All large- and small-scale capital energy schemes such as the installation of Heat Pumps, LED lighting, photovoltaic (PV) solar panels, replacing outdated equipment with *ENERGY STAR–rated* devices and other high-efficiency technologies • All discrete projects such as improvements to Building Energy Management systems or personal computer (PC) power management; • All items such as energy efficiency focused behavioral change programs; • Where refurbishment schemes have included larger elements e.g., heat pumps or complete lighting replacements. ***Numerator Exclusions***: • Public Sector Grants • Charitable funds • Funds utilized for routine maintenance or planned preventive maintenance (PPM) ***Denominator***: Annual amount of all capital (not revenue) invested by the organization in a year.
Reporting Frequency:	Annual
Unit of Measure:	Percentage
International comparison if available	• NHS England. (2025). Estates Returns Information Collection, England 2024/25. • Subject Matter Expert (SME) recommendation, citing: NHS England. (n.d.). Greener NHS (source not included). • ENERGY STAR. (n.d.). Financial Value Calculator
Desired direction:	Higher is better
Notes for all providers	
Data sources and guidance:	• DOH Health Facility Guidelines 2022 Part S – Sustainability • Facility financial report for the reporting year. • Approved or audited financial data and relevant invoices

Type: Core Indicator **Indicator Number:** E011

KPI Description (title):	**LED Lighting Coverage**
Dimension	Infrastructure
Definition:	Percentage of Gross internal area that is covered by working LED lighting. ***This can be shown floor plans or lighting layout records.*** **Note:** Report values up to a minimum of two decimal places without rounding to whole numbers
Calculation:	***Numerator***: Gross internal area (m^2) that is covered by working LED lighting ***Denominator***: Gross internal area lit in square meters (m^2). ***Denominator Exclusions***: • Leased out areas • Open car parks • Premises that are vacant and awaiting disposal
Reporting Frequency:	Annual
Unit of Measure:	Percentage
International comparison if available	• NHS England. (2025). Estates Returns Information Collection, England 2024/25. • Subject Matter Expert (SME) recommendation, citing: NHS England. (n.d.). Greener NHS (source not included). • Pan American Health Organization. (n.d.). LED Lighting in Hospitals PDF
Desired direction:	Higher is better
Notes for all providers	
Data sources and guidance:	• DOH Health Facility Guidelines 2022 Part S – Sustainability • Approved Floor plans or lighting layout records • LED lighting inventory for the reporting year. • Third-party verified or audited lighting reports

Type: Core Indicator **Indicator Number:** E012

KPI Description (title):	**Biomedical Waste Generation**
Dimension	Disposal
Definition:	It represents the percentage of biomedical waste in comparison to the total waste generated by a healthcare organization. **Group A Medical Waste** Anatomical or pathological waste, waste contaminated with human blood or other body fluids, excreta, vomit, human tissue, wastes from contagious diseases, dirty bandages, bed sheets, animal remains and all other materials on which animal lay or cloth or used by animal whether contaminated or not and mortuary wastes. **Group B Medical Waste** Sharps, usually syringes and needles, surgical tools, different medicine and medical equipment vessels, broken glass and all other sharp equipments, tools and materials. **Group C Medical Waste** Blood, tissue and microbial cultures and microbiology laboratory waste, carcasses of inoculated lab animals, stools from cholera patient or body fluid of highly infectious diseases, and mortuary waste not specified under Group A. **Group D Medical Waste** Pharmaceutical and chemical waste to which medical specifications apply. **Group E Medical Waste** Deposable linings used for patient beds, caps of bottles for receiving and storing blood, urine, urine diapers, bags or vessels used for receiving stomach waste and similar wastes. **Group F Medical Waste** Waste resulting from treatment with radioactive materials and wastes resulting from all operations related to radioactive materials. **General Waste** Non-Hazardous Waste; similar to Domestic waste **Radioactive waste**: such as products contaminated by Radionuclides including radioactive diagnostic material or radiotherapeutic materials **Note**: Actual waste quantities must be reported in **metric tons** rather than using the number of skips. All calculations and conversion factors must be fully referenced, and supporting evidence must be provided for every conversion or estimation applied in the calculation. Report values up to a minimum of two decimal places without rounding to whole numbers.
Calculation:	***Numerator***: Weight of generated biomedical waste in metric tons (Group A-F) ***Numerator Exclusions:*** • General waste • Radioactive waste

	Denominator: Total weight of all generated waste in metric tons (e.g. Medical and Non-Hazardous).
Reporting Frequency:	Annual
Unit of Measure:	Percentage
International comparison if available	• Canadian Coalition for Green Health Care. (2019). Green Hospital Scorecard Report. Green Hospital Scorecard PDF • World Health Organization. (2024). Health Care Waste PDF
Desired direction:	Lower is better
Notes for all providers	
Data sources and guidance:	• DOH Health Facility Guidelines 2022 Part S – Sustainability • Tadweer Group Services Guide (2025) – English PDF • DOH Medical Waste Management Standard for Healthcare Facilities 2025 • Facility waste management reports and waste disposal invoices issued by the Finance Department to the contracted waste management company for the reporting year • Contract agreement between the facility and the waste management service provider

Type: Core Indicator **Indicator Number:** E013

KPI Description (title):	**Non-Hazardous Waste Generation**
Dimension	Disposal
Definition:	It represents the percentage of Non-Hazardous waste (general waste) in comparison to the total waste generated by a healthcare organization. **Note**: Actual waste quantities must be reported in **metric tons** rather than using the number of skips. All calculations and conversion factors must be fully referenced, and supporting evidence must be provided for every conversion or estimation applied in the calculation. Report values up to a minimum of two decimal places without rounding to whole numbers
Calculation:	***Numerator***: Weight of Non-Hazardous waste in metric tons generated. **Non-hazardous or general waste:** waste that does not pose any particular biological, chemical, radioactive or physical hazard ***Denominator***: Total weight of all generated waste in metric tons (e.g. Medical and Non-Hazardous).
Reporting Frequency:	Annual
Unit of Measure:	Percentage
International comparison if available	• Canadian Coalition for Green Health Care. (2019). Green Hospital Scorecard Report. Green Hospital Scorecard PDF
Desired direction:	Lower is better
Notes for all providers	
Data sources and guidance:	• DOH Health Facility Guidelines 2022 Part S – Sustainability • Tadweer Group Services Guide (2025) – English PDF • DOH Medical Waste Management Standard for Healthcare Facilities 2025 • Facility waste management reports and waste disposal invoices issued by the Finance Department to the contracted waste management company for the reporting year • Contract agreement between the facility and the waste management service provider.

Type: Core Indicator **Indicator Number:** E014

KPI Description (title):	**Recyclable Waste Generation**
Dimension	Disposal
Definition:	It represents the percentage of recyclable waste in comparison to the total waste generated by a healthcare organization. **Note**: Actual waste quantities must be reported in **metric tons** rather than using the number of skips. All calculations and conversion factors must be fully referenced, and supporting evidence must be provided for every conversion or estimation applied in the calculation. Report values up to a minimum of two decimal places without rounding to whole numbers
Calculation:	***Numerator***: Weight of generated recyclable waste in metric tons Inclusions: • Plastic • Glass • Metal/cans • Paper • Construction and demolition recyclable material ***Denominator***: Total weight of all generated waste in metric tons (e.g. Medical and Non-Hazardous).
Reporting Frequency:	Annual
Unit of Measure:	Percentage
International comparison if available	• Canadian Coalition for Green Health Care. (2019). Green Hospital Scorecard Report. Green Hospital Scorecard PDF
Desired direction:	Higher is better
Notes for all providers	
Data sources and guidance:	• DOH Health Facility Guidelines 2022 Part S – Sustainability • Tadweer Group Services Guide (2025) – English PDF • Facility waste management reports and waste disposal invoices issued by the Finance Department to the contracted waste management company for the reporting year. • Contract agreement between the facility and the waste management service provider.

Type: Core Indicator **Indicator Number:** E015

KPI Description (title):	**Food Waste Cost**
Dimension	Disposal
Definition:	Invoiceable costs of all food waste. **Note**: The costs entered should be directly linkable to invoices received and entered by the finance department regarding waste costs. All calculations and conversion factors must be fully referenced, and supporting evidence must be provided for every conversion or estimation applied in the calculation. Report values up to a minimum of two decimal places without rounding to whole numbers.
Calculation:	***Numerator***: Cost of Food Waste ***Denominator***: Total Cost of All Organization's Waste Disposal per year
Reporting Frequency:	Annual
Unit of Measure:	Percentage

International comparison if available	• NHS England. (2025). Estates Returns Information Collection, England 2024/25.
	• Subject Matter Expert (SME) recommendation, citing:
	  ○ Devon Partnership NHS Trust. (2022). Green Plan 2022 (source not included).
	  ○ Online Journal of Issues in Nursing. (2022). Hospital Food Waste (source not included).

Desired direction:	Lower is better
Notes for all providers	
Data sources and guidance:	• DOH Health Facility Guidelines 2022 Part S – Sustainability • Invoices paid for food waste disposal through finance department

Summary of Changes V2 2024

KPI #	Changes
E001	Added Denominator Guidance: Report separately OUTPATIENT and INPATIENT encounters A) Outpatient: all OPD visits including face-to-face visits, diagnostics, virtual visits, ED, day case B) Inpatient discharges: include inpatient acute care, long-term care, post-acute rehabilitation Revised desired direction Lower is better"
E002	Revised unit of measure to "Percentage"
E003	Revised Numerator and Denominator: ***Numerator***: Total annual carbon emissions per scope of the Greenhouse Gas Protocol measured in CO2eq. *Report Separately each scope*: a) Scope 1 (Direct) GHG emissions Facility's direct emissions, including on-site combustion (e.g. diesel generators), medical gases, on-site treatment of waste, and emissions from facility's vehicles. b) Scope 2 (Energy indirect) emissions. refers to indirect emissions from purchased energy to power, heat or cool healthcare facilities. c) Scope 3 (all other indirect) emissions refers to a different type of indirect emissions, generated through acquiring products and services (e.g., pharmaceuticals, medical and non-medical items and equipment, food and catering, water and sanitation, waste management and disposal off-site), as well as business travel, and employees and patients commuting. ***Denominator***: Annual Total number of inpatient discharges in the facility premises (includes inpatient acute care, long-term care, post-acute rehabilitation).
E004	• Revised phrases in ***Numerator***: Annual number of virtual visits, including phone consultations. Telehealth procedure codes: 99441, 99442, 99443, 99446, 99447, 99448, 99449, 01-01, 01-02, 01-03, 01-04 ***Denominator***: Annual number of outpatient encounters - all OPD visits including face-to-face visits, diagnostics, virtual visit, ED, day case • Revise unit of measure: Percentage
E005 - E006	• Revised Denominator: defined conditioned floor area
E005	• Change the units for numerator to be MWh • Modified the definition to be aligned with the units.
E008	• ***Revised phrases in Numerator***: Annual number of unique staff trained on environmental and social drivers of health *Numerator Guidance*: Amount of full-time equivalent staff who have undergone training sessions, aimed at learning how environmental and social factors determine the health of the population the hospital serves (for example, educating on air pollution is causing respiratory and chronic diseases). Social determinants of health (SDOH) are the conditions in the environments where

	people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks. Measured per employee trained, regardless of the number of times they took the training ***Denominator***: Total Employees providing services at the facility site. Denominator inclusion: all staff (full time and contracted / part time) for medical staff non-medical staff Revised Unit of measure: Percentage
E011	Added units of measurement square meters (m^2).
E014	Added in Denominator description: (e.g. Medical and Non-Hazardous).

Summary of Changes V3 2025

KPI #	Changes
ALL KPIs	• Updated citations in **International comparison if available,** and **Data sources and guidance**
E001,	• Revised ***Definition:*** For the local standardization of energy consumption, we refer specifically to ***electricity***. This is applied by tracking an organization's total electricity use, including both ***cooling and non-cooling load***s, relative to its operations. **Note:** All energy values must be converted into megawatt-hours (MWh) for calculation purposes, and all unit conversion factors must be clearly referenced for audit and verification. Report values up to a minimum of two decimal places without rounding to whole numbers • Added ***Numerator Inclusion:*** ○ Cooling electricity consumption ○ non-cooling electricity consumption ○ all electricity consumption from solar energy • Added ***Numerator Exclusion:*** estimated readings from gasoline, diesel, and natural gas
E002	• Revised ***Definition:*** Organization's effort to reduce its use of non-renewable energy. ***Renewable energy*** is energy derived from natural sources that are replenished at a higher rate than they are consumed. For the local standardization of renewable energy in Abu Dhabi, we refer specifically to ***SOLAR ENERGY from onsite PV panels***. **Note:** All energy values must be converted into megawatt-hours (MWh) for calculation purposes, and all unit conversion factors must be clearly referenced for audit and verification. Report values up to a minimum of two decimal places without rounding to whole numbers • Added ***Numerator Guidance***: along with solar energy renewable source, include purchased renewable energy (e.g., Green Power or Renewable Energy Certificates)
E003	• Added in **Definition:** A measure of an organization's greenhouse gas (GHG) emissions across all scopes, in accordance with the Greenhouse Gas Protocol standards (ghg-protocol-revised.pdf) **Scope 1 Emissions:** These include direct GHG emissions from owned or controlled sources. Facility direct emissions that contribute to greenhouse gas

	emission, For example emissions from stationary combustion, mobile combustion, fugitive releases from refrigerants and fire suppression systems, volatile anaesthetic agents, medical gases, and on-site waste treatment activities. **Scope 2 Emissions:** These represent indirect emissions from the consumption of purchased electricity, heating, cooling, or steam. Emission factors must be obtained from the relevant grid supplier. Inclusion of of Scope 2: **Location-based:** Uses average emission factors for the grid where the energy was consumed. **AND** **Market-based (if applicable)**: Uses emission factors based on contractual instruments (e.g., clean energy certificates). **Scope 3 Emissions:** Calculated in line with the Greenhouse Gas Protocol Scope 3 Guidance. These represent all other indirect emissions resulting from organizational activities not included in Scopes 1 and 2. ***(Temporary suspension of Scope 3 data submission)*** **Note:** Report values up to a minimum of two decimal places without rounding to whole numbers • Revised **Numerator** and **Unit of measure** to ***tCO2eq (metric tons)*** Scope 1 (Direct) GHG emissions Scope 2 (Energy indirect) emissions. (Use updated year **TAQA UAE Emission Factor** as common Emission factor for calculation currently published in TAQA website: Announcements – TAQA) • Removed Scope 3 submission
E005	• Revised ***Definition:*** **Energy Use Intensity (EUI)** is a metric used to assess the energy efficiency of a building. It represents the building's metered annual energy consumption and enables comparison of energy performance across facilities of similar type and function. EUI is calculated by dividing the total annual energy consumed including electricity for ***cooling*** and ***non-cooling*** purposes by the building's total *conditioned floor area.* For the local standardization of energy consumption, we refer specifically to ***electricity***. Gas consumption where boiler/kitchen are in use are excluded. *Conditioned floor area* means the sum of areas of all floors in conditioned space in the structure, including basements, cellars, and intermediate floored levels measured from the exterior faces of exterior walls or from the center line of interior walls, excluding covered walkways, open roofed-over areas, porches, exterior terraces or steps, chimneys, roof overhangs and similar features. **Note:** All energy values must be converted into megawatt-hours (MWh) for calculation purposes, and all unit conversion factors must be clearly referenced for audit and verification. Report values up to a minimum of two decimal places without rounding to whole numbers • Added ***Numerator Inclusion:*** ○ Cooling electricity consumption ○ non-cooling electricity consumption ○ all electricity consumption from solar energy • Added ***Numerator Exclusion:*** estimated readings from gasoline, diesel, and natural gas
E006	• Added in **Definition:** Facility water data is collected in cubic meters (m3) and divided by the reported conditioned floor area (m2) to calculate a final WUI (m3/m2).

	Note: Report values up to a minimum of two decimal places without rounding to whole numbers • Moved from Denominator paragraph to **Definition**: *Conditioned floor* area means the sum of areas of all floors in conditioned space in the structure, including basements, cellars, and intermediate floored levels measured from the exterior faces of exterior walls or from the center line of interior walls, excluding covered walkways, open roofed-over areas, porches, exterior terraces or steps, chimneys, roof overhangs and similar features. • Added ***Denominator Exclusion:*** recycled water supplied by the municipality for landscaping purposes
E007	• Retired
E010	• Moved from **Definition** to **Numerator Inclusions/Exclusions** and revised: ***Numerator Inclusions***: • All large- and small-scale capital energy schemes such as the installation of Heat Pumps, LED lighting, photovoltaic (PV) solar panels, replacing outdated equipment with *ENERGY STAR–rated* devices and other high-efficiency technologies • All discrete projects such as improvements to Building Energy Management systems or personal computer (PC) power management; • All items such as energy efficiency focused behavioral change programs; • Where refurbishment schemes have included larger elements e.g., heat pumps or complete lighting replacements. ***Numerator Exclusions***: • Public Sector Grants • Charitable funds • Funds utilized for routine maintenance or planned preventive maintenance (PPM)
E011	• Added in **Definition:** ***This can be shown floor plans or lighting layout records.*** **Note:** Report values up to a minimum of two decimal places without rounding to whole numbers • Removed from **Definition** the Inclusions • Moved from **Definition** to **Denominator** the **Exclusions**
E012 - E014	• Added in **Definition: Note:** Actual waste quantities must be reported in metric tons rather than using the number of skips. All calculations and conversion factors must be fully referenced, and supporting evidence must be provided for every conversion or estimation applied in the calculation. Report values up to a minimum of two decimal places without rounding to whole numbers. • Added **"metric"** tons as units in **Numerators** and **Denominators**
E015	• Added in **Definition: Note:** The costs entered should be directly linkable to invoices received and entered by the finance department regarding waste costs. All calculations and conversion factors must be fully referenced, and supporting evidence must be provided for every conversion or estimation applied in the calculation. Report values up to a minimum of two decimal places without rounding to whole numbers.