

Department of Health - Abu Dhabi Enhancement of Abu Dhabi Quality Index: Muashir

Emerald Sustainability Index - Measure Cards

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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.qov.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.

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- 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

"Emeral 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 Healthcare general and specialist Hospital Providers 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 Inpatient 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 quarterly quality performance indicators through Online Portal.

Q. What are the Regulation related to this guidance?

- Legislation establishing the Health Sector
- As per DOH Health Facility Guidelines 2022 Part S Sustainability, this guidance applies to all DOH Licensed Hospital Healthcare Facilities in the Emirate of Abu Dhabi in accordance with the requirements set out in this Standard.

KPI Description (title):	Annual Energy Consumption Per Patients Covered
Dimension	Operations
Definition:	Measure of an organization's energy consumption
Calculation:	Numerator: Total Energy consumption (megawatt hours [MWh]) Denominator: Total number of patients (All patients including outpatient and inpatient).
Reporting Frequency:	Annual
Unit of Measure:	Megawatt hours [MWh] Per patients
International comparison if available	https://www.health.vic.gov.au/planning-infrastructure/energy- efficiency-in-hospitals Energy Use in Hospitals (energystar.gov)
Desired direction:	Improving energy efficiency means using less energy to achieve the same level of outcome
Notes for all providers	
Data sources and guidance:	 DOH Health Facility Guidelines 2022 Part S – Sustainability Energy meters related to ADDC (Abu Dhabi Distribution Company)

KPI Description (title):	Percent of Renewable Energy
Dimension	Operations
Definition:	Organization's effort to reduce its use of non-renewable energy
Calculation:	 Numerator: Total annual MWh generated from renewable sources Definition: Renewable energy is energy derived from natural sources that are replenished at a higher rate than they are consumed: SOLAR ENERGY WIND ENERGY GEOTHERMAL ENERGY HYDROPOWER OCEAN ENERGY BIOENERGY Denominator: Total annual megawatt hours [MWh]
Reporting Frequency:	Annual
Unit of Measure:	megawatt hours [MWh]
International comparison if available	https://www.un.org/en/climatechange/what-is-renewable-energy https://u.ae/en/information-and-services/environment-and- energy/water-and-energy/types-of-energy-sources/solar-energy
Desired direction:	Higher the better
Notes for all providers	
Data sources and guidance:	 DOH Health Facility Guidelines 2022 Part S – Sustainability Energy meters related to ADDC (Abu Dhabi Distribution Company)

KPI Description (title):	Annual Carbon Emissions Per Patients Covered
Dimension	Operations
Definition:	Measure of an organization's GHG emissions across all scopes
Calculation:	 Numerator: Annual carbon emissions across all scopes (1,2,3) (CO2Eq) Scope 1 (Direct) GHG emissions All Scope 1 emissions must be accounted for. These occur from sources owned or controlled by the organisation. Examples include emissions as a result of combustion in boilers owned or controlled by the organisation and fugitive emissions from equipment such as air conditioning units. This includes emissions from organisation-owned fleet vehicles (including vehicles on finance leases). An analysis of related gas consumption, in kWh, must also be included. Scope 2 (Energy indirect) emissions. All Scope 2 emissions must be accounted for. These results from energy consumed which is supplied by another party (e.g. electricity supply in buildings or outstations), and purchased heat, steam and cooling. An analysis of related energy consumption, in kWh, must also be included. Denominator: Annual Total number of patients (All patients including outpatient and inpatient).
Reporting Frequency:	Annual
Unit of Measure:	Per patients
International comparison if available	https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment data/file/832776/sustainability reporting guidance 2019-20.pdf Scope 1 and Scope 2 Inventory Guidance US EPA
Desired direction:	Lower the better
Notes for all providers	
Data sources and guidance:	- DOH Health Facility Guidelines 2022 Part S – Sustainability

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: Count of virtual patient visits Telehealth procedure codes: 99441, 99442, 99443, 99446, 99447, 99448, 99449, 01-01, 01-02, 01-03, 01-04 Denominator: Count of total patient visits or encounters (inpatient + outpatient + virtual)
Reporting Frequency:	Annual
Unit of Measure:	Patient Visits/Encounters
International comparison if available	https://health.ucdavis.edu/news/headlines/telehealth-cuts-health-cares-carbon-footprint-and-patients-costs-during-pandemic/2023/01 https://www.healthaffairs.org/doi/10.1377/hlthaff.2020.01103
Desired direction:	Higher is Better
Notes for all providers	
Data sources and guidance:	- DOH Health Facility Guidelines 2022 Part S – Sustainability

KPI Description (title):	Energy Use by Intensities
Dimension	Operations
Definition:	Energy Use Intensity (EUI) captures a building's annual energy use as a function of its size. It is a measure that determines the building's energy performance and is useful for benchmarking and setting targets. Energy data reported by facilities should be in Kwh to maintain consistency, and so various energy types could be compiled and then divided by the reported floor area (m2) to calculate a final EUI (Kwh/m2). The total average EUI across all hospitals was calculated to be 2.8 Kwh/m2/year.
Calculation:	Numerator: Total energy used (Kwh) Denominator: Floor space (m2)
Reporting Frequency:	Annual
Unit of Measure:	Kwh/M2
International comparison if available	2019-Green-Hospital-Scorecard-Report.pdf (greenhealthcare.ca) Energy Use in Hospitals (energystar.gov) Measuring hospital energy performance HFM Health Facilities Management (hfmmagazine.com)
Desired direction:	Lower is better
Notes for all providers	
Data sources and guidance:	 DOH Health Facility Guidelines 2022 Part S – Sustainability Energy meters related to ADDC (Abu Dhabi Distribution Company)

KPI Description (title):	Water Use Intensities
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 and is useful for benchmarking and setting targets. 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).
Calculation:	Numerator: Total Water consumption (cubic meter) Denominator: Reported conditioned floor area (m2) 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.
Reporting Frequency:	Annual
Unit of Measure:	m^3/m^2
International comparison if available	2019-Green-Hospital-Scorecard-Report.pdf (greenhealthcare.ca) HTM 07-04 Final.pdf (england.nhs.uk) Reducing water use at healthcare facilities Conditioned floor area Definition Law Insider
Desired direction:	Lower is better
Notes for all providers	
Data sources and guidance:	 DOH Health Facility Guidelines 2022 Part S – Sustainability Water meters related to ADDC. This is reflected as well in the bills for water and electricity paid by the facility.

KPI Description (title):	Non-Fossil fuel led CCHP units operated on site	
Dimension	Infrastructure	
Definition:	To define the percentage of separate non-fossil fuel led CCHP (Combined Cooling, Heat and Power) units operated on the site. Combined cooling, heat & power (CCHP), also known as trigeneration, is an extension of combined heat & power (CHP). While CHP only generates electricity and heat, CCHP adds cooling to the list. In other words, trigeneration or CCHP means some of the heat that is produced is also used to generate cooling energy. Inclusions: CCHP operating on; o Oil o Gas o Coal	
Calculation:	Numerator: Total number of separate non-fossil fuel led CCHP units operated on the site Denominator: Total number of CCHP units operated on the site	
Reporting Frequency:	Annual	
Unit of Measure:	Percentage	
International comparison if available	Estates Returns Information Collection, Summary page and dataset for ERIC 2021/22 - NDRS (digital.nhs.uk) CCHP: Combined Cooling, Heat & Power energyst.com	
Desired direction:	Lower is better	
	Notes for all providers	
Data sources and guidance:	 DOH Health Facility Guidelines 2022 Part S – Sustainability Sections: Commitment to Carbon Footprint Reduction (GHG) & Net Zero Carbon Renewable Energy 	

KPI Description (title):	Percent of Employees Trained on Environmental and Social Health Drivers
Dimension	Infrastructure
Definition:	Organization's actions to raise awareness on environmental and social health drivers among employees
Calculation:	Numerator: Number of employees trained on environmental and social health drivers 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. Denominator: Total Employees (include anyone providing care or services at the site).
Reporting Frequency:	Annual
Unit of Measure:	Number of employees
International comparison if available	https://www.anthem.com/blog/your-health-care/social-drivers-of-health-and-how-they-affect-you/
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 Abu Dhabi Public Health Center (ADPHC)

KPI Description (title):	Percent of Trained on 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. The learning objectives of the Geneva Sustainability Masterclasses are to: • Gain a deeper understanding of the causes and long-term threats of environmental hazards to human health & health equity • Identify health and social co-benefits associated with environmentally sustainability • Evaluate options for strengthening organizations' mitigation and resiliency strategies • Identify the most important next steps for their organization to take in pursuing an environmental sustainability strategy
Calculation:	 Numerator: Number of employees that have attended at least one training on climate change or sustainability. Inclusion: can be Attendance Certificate of Healthcare Providers in Geneva Sustainability Masterclasses OR other trainings. Denominator: Total Employees (include anyone providing care or services at the site).
Reporting Frequency:	Annual
Unit of Measure:	Number of employees
International comparison if available	https://greenbusinessbureau.com/business- function/executive/executive-guide/corporate-sustainability-training -an-executive-guide/ https://www.sustainability.gov/federalsustainabilityplan/ workforce.html

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Desired direction:	Higher is better
Notes for all providers	
Data sources and guidance:	- DOH Health Facility Guidelines 2022 Part S – Sustainability

KPI Description (title):	Energy Efficient Schemes Costs
Dimension	Operations
Definition:	Annual amount of all capital (not revenue) invested in energy efficiency projects/programs Inclusions: • All large- and small-scale capital energy schemes such as the installation of Combined Cooling, Heat, and Power (CCHP) units, LED lighting, photovoltaic (PV) solar etc.; • 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., CCHP or complete lighting replacements. Exclusions: • Public Sector Grants • Charitable funds
Calculation:	 Numerator: Annual amount of all capital (not revenue) invested in energy efficiency projects /programmes 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	Estates Returns Information Collection, Summary page and dataset for ERIC 2021/22 - NDRS (digital.nhs.uk) Greener NHS (england.nhs.uk) Financial Value Calculator ENERGY STAR
Desired direction:	Higher is better
Notes for all providers	
Data sources and guidance:	 DOH Health Facility Guidelines 2022 Part S – Sustainability Facility financial report

KPI Description (title):	LED Lighting Coverage	
Dimension	Infrastructure	
Definition:	Percentage of Gross internal area that is covered by working LED lighting Inclusions: • Temporary buildings; • Embedded education and training facilities; • University accommodation; • Underground and multi-story car parks; • Areas temporarily in the possession of building contractors that is either owned or defined in the terms of a lease Exclusions: • Leased-out areas; • Open car parks; • Premises that are vacant and awaiting disposal	
Calculation:	Numerator: Gross internal area that is covered by working LED lighting Denominator: Gross internal area lit.	
Reporting Frequency:	Annual	
Unit of Measure:	Percentage	
International comparison if available	Estates Returns Information Collection, Summary page and dataset for ERIC 2021/22 - NDRS (digital.nhs.uk) Greener NHS (england.nhs.uk) LED LIGHTING IN HOSPITALS Final.pdf (paho.org)	
Desired direction:	Higher is better	
Notes for all providers		
Data sources and guidance:	 DOH Health Facility Guidelines 2022 Part S – Sustainability Facility Management Department Reports and Inspections 	

KPI Description (title):	Biomedical Waste Generation
Dimension	Disposal
(title):	
	General Waste Non-Hazardous Waste; similar to Domestic waste Radioactive waste: such as products contaminated by Radionuclides including radioactive diagnostic material or radiotherapeutic materials

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Calculation:	 Numerator: Weight of generated biomedical waste in tons (Group A-F) Exclusions: General waste Radioactive waste 	
	Denominator : Total weight of all generated waste in tons (e.g. Medical and Non-Hazardous).	
Reporting Frequency:	Annual	
Unit of Measure:	Percentage	
International comparison if available	2019-Green-Hospital-Scorecard-Report.pdf (greenhealthcare.ca) www.canadacoalition.ca Health-care waste (who.int)	
Desired direction:	Lower is better	
Notes for all providers		
Data sources and guidance:	 DOH Health Facility Guidelines 2022 Part S – Sustainability WasteReductionGuidelinesEn.pdf (tadweer.gov.ae) Clinical Medical Waste Management Program in Abu Dhabi (cwtme.ae) Health Sector EHSMS Standards- List of content.pdf PPR/HCP/P0002/07 (Medical Waste Management in Health Care Facilities) Facility Management Reports and Waste Invoices generated by the finance department to the Waste Disposal Contracted Company. 	

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.	
Calculation:	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 tons (e.g. Medical and Non-Hazardous).	
Reporting Frequency:	Annual	
Unit of Measure:	Percentage	
International comparison if available	2019-Green-Hospital-Scorecard-Report.pdf (greenhealthcare.ca) www.canadacoalition.ca	
Desired direction:	Lower is better	
Notes for all providers		
Data sources and guidance:	 DOH Health Facility Guidelines 2022 Part S – Sustainability WasteReductionGuidelinesEn.pdf (tadweer.gov.ae) Facility Management Reports and Waste Invoices generated by the finance department to the Waste Disposal Contracted Company. 	

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.	
Calculation:	 Numerator: Weight of generated recyclable waste in tons Inclusions: Plastic Glass Metal/cans Paper Construction and demolition recyclable material Denominator: Total weight of all generated waste in tons 	
Reporting Frequency:	Annual	
Unit of Measure:	Percentage	
International comparison if available	2019-Green-Hospital-Scorecard-Report.pdf (greenhealthcare.ca) www.canadacoalition.ca	
Desired direction:	Higher is better	
Notes for all providers		
Data sources and guidance:	 DOH Health Facility Guidelines 2022 Part S – Sustainability WasteReductionGuidelinesEn.pdf (tadweer.gov.ae) Facility Management Reports and Waste Invoices generated by the finance department to the Waste Disposal Contracted Company 	

KPI Description (title):	Food Waste Cost
Dimension	Disposal
Definition:	Invoiceable costs of all food waste. The costs entered should be directly linkable to invoices received and entered by the finance department for waste costs.
Calculation:	<u>Numerator</u>: Cost of Food Waste<u>Denominator</u>: Total Cost of All Organization's Waste Disposal per year
Reporting Frequency:	Annual
Unit of Measure:	Percentage
International comparison if available	Estates Returns Information Collection, Summary page and dataset for ERIC 2021/22 - NDRS (digital.nhs.uk) Greener NHS (england.nhs.uk) https://www.england.nhs.uk/south/wp- content/uploads/sites/6/2022/06/Devon-DPT-Green-Plan-2022.pdf https://ojin.nursingworld.org/table-of-contents/volume-27- 2022/number-2-may-2022/articles-on-previously-published- topics/hospital-food-waste/ https://www.blog-qhse.com/en/food-waste-sorting-in-hospitals-and- care-homes-where-to-start
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