

<b>9</b>	<b>EXISTING BUILDINGS .....</b>	<b>2</b>
<b>9.1</b>	<b>GENERAL.....</b>	<b>2</b>
9.1.1	Scope .....	2
9.1.2	Reference.....	2
<b>9.2</b>	<b>ENERGY PERFORMANCE.....</b>	<b>2</b>
9.2.1	Scope .....	2
9.2.2	Description .....	2
9.2.3	Measurement Principle .....	3
9.2.4	Score .....	3
<b>9.3</b>	<b>WATER PERFORMANCE.....</b>	<b>3</b>
9.3.1	Scope .....	3
9.3.2	Description .....	3
9.3.3	Measurement Principle .....	4
9.3.4	Score .....	4

ARAB ENGINEERING BUREAUS

## 9 EXISTING BUILDINGS

### 9.1 GENERAL

#### 9.1.1 Scope

1 The Existing Buildings Category consists of factors associated with existing building operations and maintenance.

(a) Impacts: Environmental impacts resulting from ineffective building operations and maintenance include:

- (i) Climate Change
- (ii) Fossil Fuel Depletion
- (iii) Water Depletion
- (iv) Materials Depletion
- (v) Human Comfort & Health

(b) Mitigate Impact: Factors that could mitigate impact include:

- (i) Purchase and installation of water conserving fixtures and appliances.
- (ii) Implementation of metering and sub-metering strategy to measure, track and monitor water and energy use for future enhancements
- (iii) Implement landscape maintenance plan to minimize irrigation water needs
- (iv) Implementation of leak detection systems
- (v) Promote and educate users about the sustainable initiatives of the building
- (vi)

#### 9.1.2 Reference

1 The following documents are referred to in this section:

Global Sustainability Assessment System (GSAS) - v 2.1-2013,[Refer to Section 7 Part ]

QCS Section 7 part 3 Energy

QCS Section 7 part 4 Water

### 9.2 ENERGY PERFORMANCE

#### 9.2.1 Scope

1 Energy performance shall be measured for the following categories of the buildings:

Table 3: Building Typology

Commercial
Governmental
Education
Light Industry
Health Centers
Sports
Railways

#### 9.2.2 Description

- 1 Establish energy efficient operating systems and improve energy performance in order to reduce environmental and economic impacts associated with excessive energy use.
- 2 The Project shall record energy consumption data on monthly basis and commit to sharing this data with the relevant authorities. Meters shall be calibrated at the manufacturer's recommended interval.
- 3 The Project shall Implement an educational program through signage or regular occupants training on sustainable maintenance policies to reduce overall energy consumption during building operation.

#### **9.2.3 Measurement Principle**

- 1 The Project shall develop and implement an Operation and Maintenance Plan for the maintenance of energy systems complying with the above-mentioned requirements.
- 2 The Facility Manager shall demonstrate improvements on the operating energy performance within the building compared to previous years' data.

#### **9.2.4 Score**

Table 2: Recommended minimum Requirement for QCS's Building Typologies

Operation and Maintenance Plan and Records demonstrating improvements on previous years' performance shall demonstrate compliance

### **9.3 WATER PERFORMANCE**

#### **9.3.1 Scope**

- 1 Water consumption shall be measured for the following categories of the buildings:

Table1: Building Typology

Commercial
Governmental
Education
Light Industry
Health Centers
Sports
Railways

#### **9.3.2 Description**

- 1 The Project shall encourage the use, purchase, and installation of water efficient fixtures.
- 2 The Project shall record water consumption data on monthly basis and commit to sharing this data with the relevant authorities. It is recommended to meter the landscape irrigation, cooling towers, and reused water separately. Meters shall be calibrated at the manufacturer's recommended interval.
- 3 The Project shall reduce use of potable water in landscape irrigation by specifying native and/or adaptive plants, use of rainwater and greywater and the use of TSE water (as available) for irrigation.
- 4 The Project shall Implement an educational program through signage or regular occupants training on sustainable maintenance policies to reduce overall water consumption during building operation

### 9.3.3 Measurement Principle

- 1 The Project shall develop and implement an Operation and Maintenance Plan for the maintenance and/or replacement of water fixtures complying with the above-mentioned requirements.
- 2 The Facility Manager shall demonstrate that water efficient fixtures are being used and maintained within the building and demonstrate improvement in water consumption within the building compared to previous years' data.

### 9.3.4 Score

Table 2: Recommended minimum Requirement for QCS's Building Typologies

Operation and Maintenance Plan and Records demonstrating improvements on previous years' performance shall demonstrate compliance

END OF PART