



## BUILDING A GREENER TOMORROW

Green Buildings · Smart Cities · Healthy Communities

# ARZ 2.0 GBRS

## Green Building Rating System

Sustainable living in a sustainable environment



[www.arzrating.com](http://www.arzrating.com)

## ARZ 2.0 What for?

ARZ 2.0 GBRS (Green Building Rating System) is a comprehensive assessment tool that:

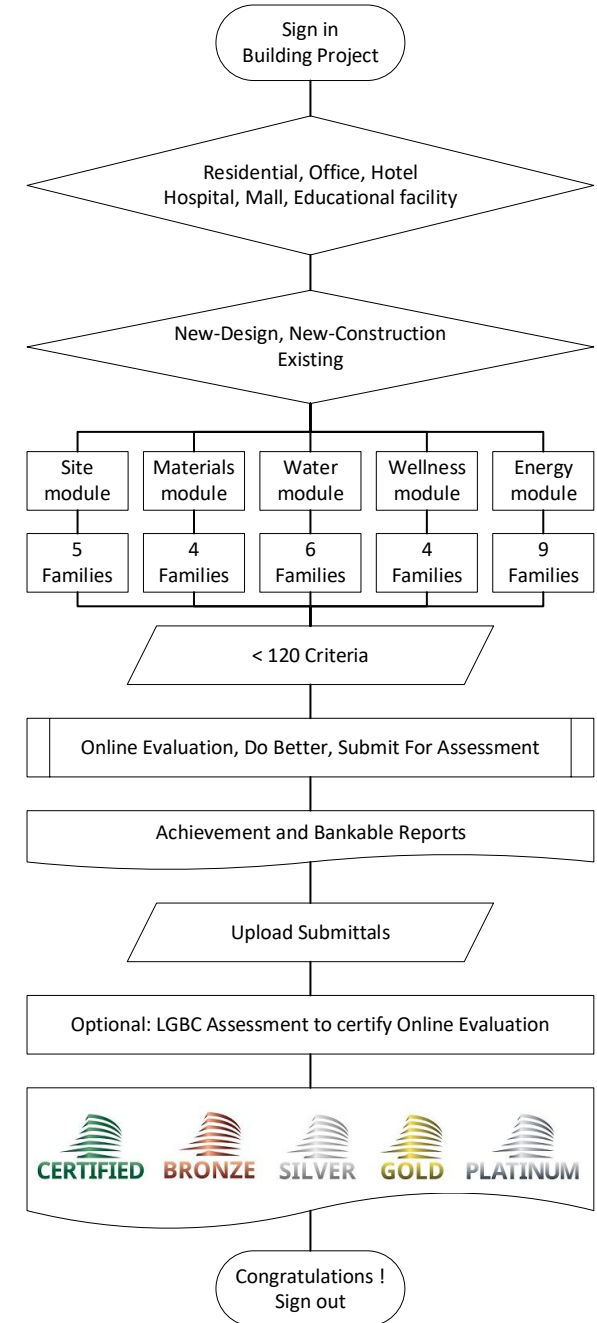
- Quantifies online the performance of buildings.
- Offers bankable reports.
- Offers reports to enhance the CSR (Corporate Social Responsibility) of a business.
- Is a friendly guide for the Architects and Engineers.
- Is a one-stop source for Architecture and Engineering students.
- Acts as a TPA (Third Party Assessor) for a fair and impartial building project evaluation.

## ARZ 2.0 Product mission

The LGBC product ARZ 2.0 GBRS purpose is to help community individuals:

- To understand the basic requirements for a sustainable living in a sustainable environment using multiple means of communication.
- To give guidelines for a proper building design that responds to above basic requirements.
- To give guidelines how to construct above building respecting the basic requirements.
- To assure safety and healthy space for the people who occupy the building.
- To propose objective metrics to evaluate how much the building responds to sustainability requirements.

## ARZ 2.0 Process description



## Module Site Criteria

### Si-1- Location

- Si-1.1- Access to Amenities
- Si-1.2- Access to Public Transportation
- Si-1.3- Preserve or Enhance Ecological Value

### Si-2- Planning

- Si-2.1- Outdoor Areas for Recreation
- Si-2.2- Bicycle Racks
- Si-2.3- Sustainable Parking Management Program
- Si-2.4- Heat Island Effect Reduction
- Si-2.5- Passive Design Strategies

### Si-3- Pollution

- Si-3.1- Night Light Pollution Reduction
- Si-3.2- Stormwater Management
- Si-3.3- Waste Water Treatment
- Si-3.4- Air Pollution Reduction
- Si-3.5- Refrigerant Management
- Si-3.6- Site Noise Reduction

### Si-4- Management & Operations

- Si-4.1- Environmental Protection Policy
- Si-4.2- Environmental Protection Awareness
- Si-4.3- Construction Environmental Management System
- Si-4.4- Car Pooling
- Si-4.5- Plantation Care / Soft Landscaping Maintenance Program
- Si-4.6- Grounds Maintenance Regime
- Si-4.7- Emissions Measurements
- Si-4.8- Pollution Prevention of Maintenance Activities
- Si-4.9- Commissioning Management

### Si-5- Bonus

- Si-5.1- Building Information Modeling
- Si-5.2- Integrated Building Design
- Si-5.3- Preserve Local Heritage and Cultural Identity
- Si-5.4- Innovation

## Module Materials Criteria

### Ma-1- Waste Management

- Ma-1.1- Solid Waste management - During Construction

### Ma-2- Material Sourcing

- Ma-2.1- Local/Regional Materials
- Ma-2.2- Recycled Materials
- Ma-2.3- Material Environmental Impact (Embodied Energy)
- Ma-2.4- Material Durability and Maintenance
- Ma-2.5- Materials Reuse
- Ma-2.6- Certified Sustainable Materials

### Ma-3- Management & Operations

- Ma-3.1- Recycling
- Ma-3.2- Waste Reduction
- Ma-3.3- Awareness of Waste Management
- Ma-3.4- Sustainable Purchasing
- Ma-3.5- Hazardous Waste

### Ma-4- Bonus

- Ma-4.1- Life Cycle Assessment
- Ma-4.2- Waste Audit
- Ma-4.3- Innovation

## Module Water Criteria

### Wa-1- Water Metering and Control

- Wa-1.1- Water Metering
- Wa-1.2- Water Submetering

### Wa-2- Indoor Water Consumption Reduction

- Wa-2.1- Water Saving Fixtures

### Wa-3- Landscape & Irrigation

- Wa-3.1- Landscape Water Demand
- Wa-3.2- Irrigation System Efficiency

### Wa-4- Alternative Water Sources

- Wa-4.1- Alternative Water Sources

### Wa-5- Management & Operations

- Wa-5.1- Water Management Policy
- Wa-5.2- Water Conservation Awareness
- Wa-5.3- Water Consumption Tracking
- Wa-5.4- Water Leak Management
- Wa-5.5- Water Systems Operation and Maintenance

### Wa-6- Bonus

- Wa-6.1- Cooling Towers
- Wa-6.2- Water Auditing
- Wa-6.3- Innovation

## Module Wellness Criteria

### We-1- Occupant Comfort & Safety

- We-1.1- Daylighting
- We-1.2- Indoor Air Quality
- We-1.3- Glare Control
- We-1.4- Artificial Lighting
- We-1.5- Outdoor Views
- We-1.6- Thermal Comfort
- We-1.7- Acoustic Comfort
- We-1.8- Occupant Safety
- We-1.9- Building Accessibility

### We-2- Materials Emissions

- We-2.1- No Hazardous Materials
- We-2.2- Adhesives and Sealants
- We-2.3- Paints and Coatings
- We-2.4- Wood Resins
- We-2.5- Ceiling Materials
- We-2.6- Flooring Materials
- We-2.7- Wall Panels
- We-2.8- Insulation

### We-3- Management & Operations

- We-3.1- Wellness Management Procedures
- We-3.2- Wellness Awareness
- We-3.3- Smoke-free Buildings

### We-4- Bonus

- We-4.1- Computational Fluid Dynamics (CFD)
- We-4.2- Indoor Air Quality Testing
- We-4.3- Health and Safety
- We-4.4- Innovation

## Module Energy Criteria

### En-1- Metering & Control

- En-1.1- Energy Metering
- En-1.2- Energy Submetering
- En-1.3- BAS or BMS

### En-2- Building Envelope (Based on Climate Zone)

- En-2.1- Opaque Thermal Transmittance
- En-2.2- Glass Thermal Transmittance and Solar Performance
- En-2.3- Opaque Solar Reflectivity

### En-3- Heating, Ventilating, Air Conditioning and Refrigeration

- En-3.1- Cooling Equipment Efficiency
- En-3.2- Heating Equipment Efficiency
- En-3.3- Refrigeration Equipment Efficiency
- En-3.4- Heat Recovery Technologies
- En-3.5- Efficient Air Distribution
- En-3.6- Efficient Water Distribution
- En-3.7- Efficient Ventilation System

### En-4- Domestic Water Systems

- En-4.1- Efficient Domestic Water Distribution
- En-4.2- Domestic Hot Water Energy
- En-4.3- Efficient Water Heating

### En-5- Lighting

- En-5.1- Efficient Lighting Fixtures
- En-5.2- Lighting Controls

### En-6- Energy Efficient Equipment

- En-6.1- Energy Efficient Appliances
- En-6.2- Energy Efficient Elevator/Escalator/Travelator
- En-6.3- Electrical Power Quality

### En-7- Renewable Energy Sources

- En-7.1- Alternative Energy Sources

### En-8- Management & Operations

- En-8.1- Energy Management Policy
- En-8.2- Energy Conservation Awareness
- En-8.3- Energy Consumption Tracking
- En-8.4- Energy Systems Operation and Maintenance
- En-8.5- Energy Systems Commissioning

### En-9- Bonus

- En-9.1- Building Energy Modeling
- En-9.2- Peak Load Reduction
- En-9.3- Energy Auditing
- En-9.4- Innovation



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