

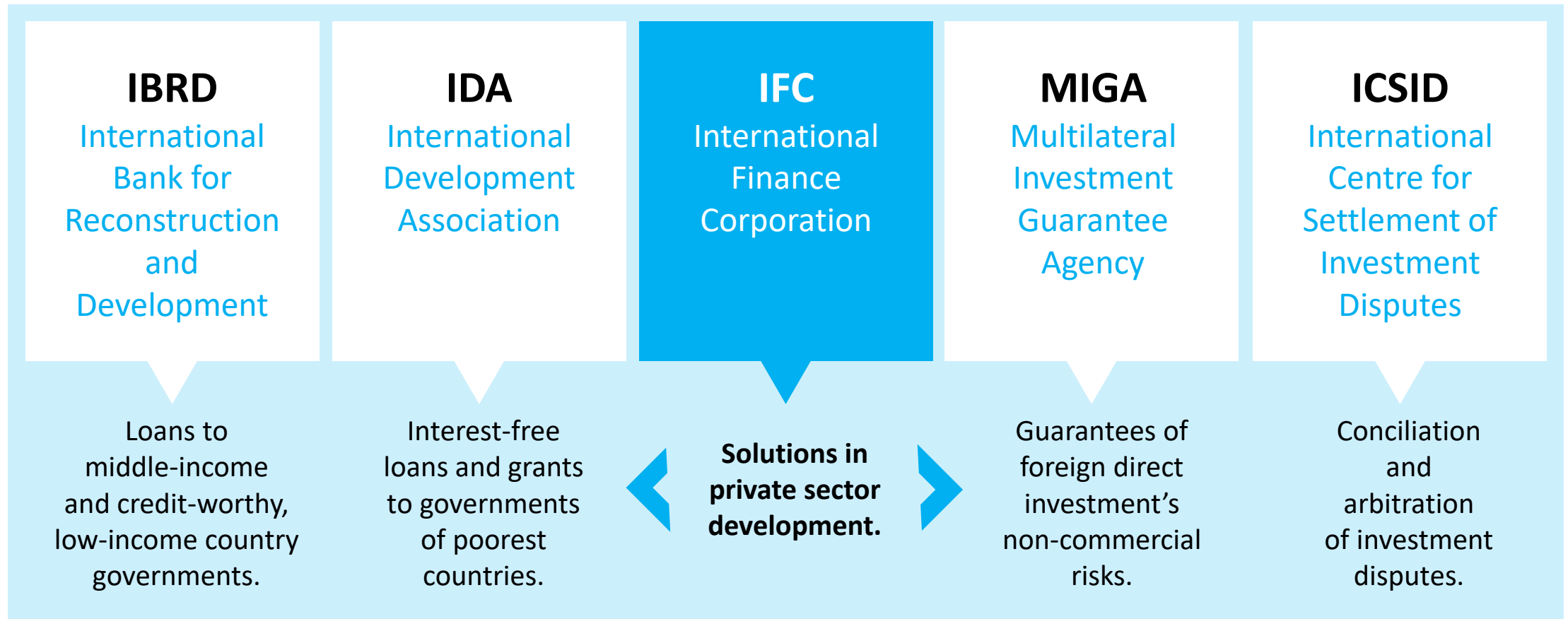


Creating Markets, Creating Opportunities



Standards for Building Resilience and Sustainability

IFC is a Member of the World Bank Group





IPCC:

**Risks are increasing
with global warming**

**Climate impacts felt
disproportionately in
urban areas with the
most economically and
socially marginalized**

Cities & Buildings: A Challenge, An Opportunity

Mitigation



Green buildings, sustainable transport, clean energy

Quantitative
Inclusive
Collaborative

Adaptation



Infrastructure protection, safety, business continuity

A Four-Part Collaborative Strategy



How can we work with you?

Advisory to governments and our toolkit



Property Tax Incentive



Height Bonus



Expedited Permitting



Reduced Permitting



Grants



Loan Programs



Technical Assistance



Net Metering



Public Campaigns



Building Legislation

Some examples

+ Argentina – Exclusion of VAT

+ Bangladesh – Discounted Financing Rate

+ Brazil – Discounted Property Tax

+ Colombia – Exclusion of VAT and Income Tax Deduction

+ India – Extra Floor Area Ratio

+ Indonesia – Lower Loan-to-Value Ratio

+ Ghana – Discounted Building Permit Fees

+ Kenya – Tax Exemption

+ Peru (Arequipa) – Height Bonus Incentive

+ Peru (Cusco) – Height Bonus Incentive

+ Peru (Miraflores, Lima) – Extra Floor Area Ratio

+ Peru (San Borja, Lima) – Height Bonus Incentive

+ Peru (Surco, Lima) – FAR Incentive

EDGE: Excellence in Design for Greater Efficiencies

1.

Free Software



Further Resource: [EDGE Software Demo](#)

2.

Achievable Standard



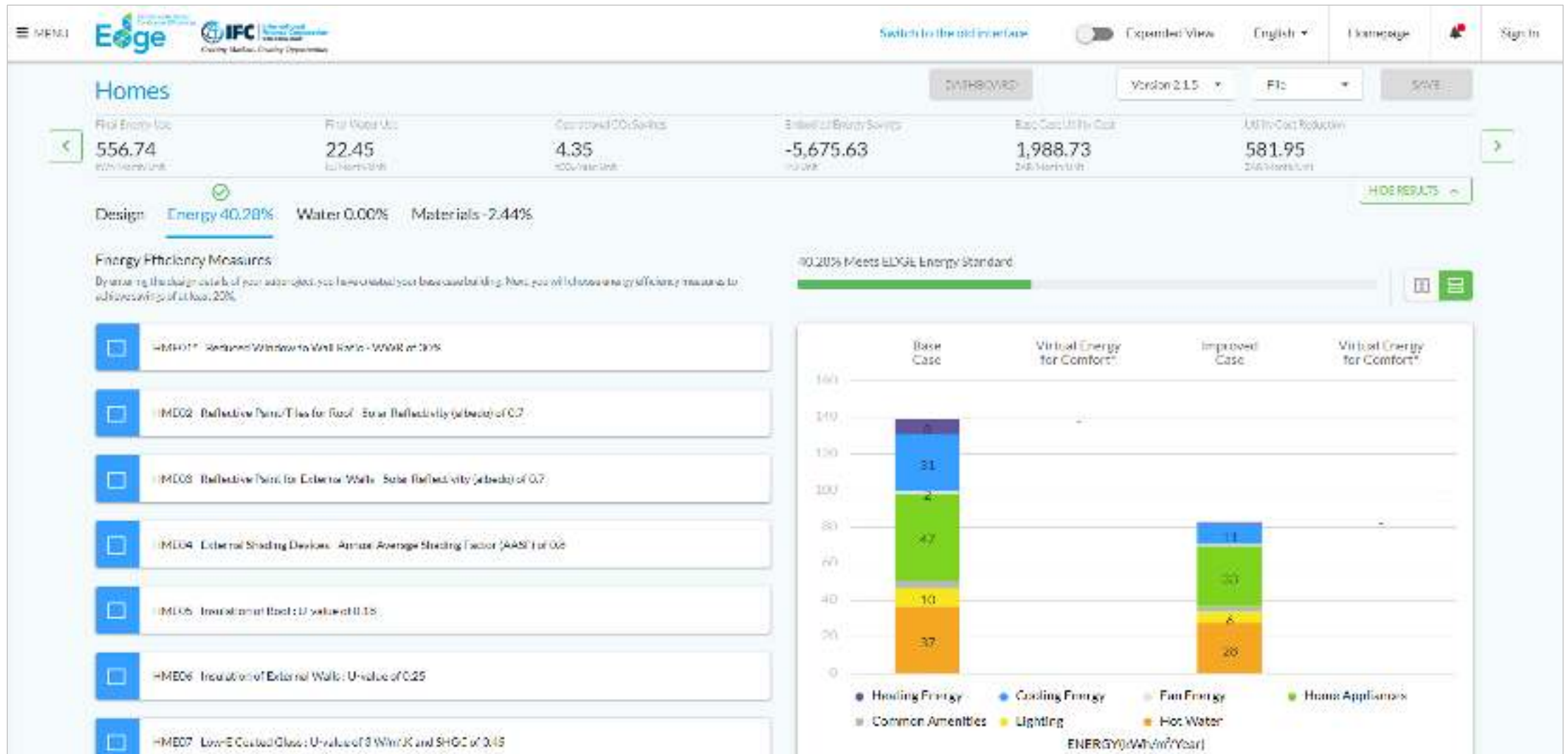
Energy | Water | Materials

3.

Verified Green Label



Choose Green Building Strategies and Calculate their Financial and Environmental Impacts



Who's certifying with EDGE

- 50 projects certified, 816,000 sqm (72% was certified in CY2021), 6,400 homes
- 3.77 million sqm currently registered and pursuing certification
- Savings: 46,000 MWh/year in energy, 15.3 million m³/year in water;
- 4.4 million GJ in embodied energy; 22,000 tCO₂/year emissions



Can be used for any building typology



Green and resilient buildings

Started with climate change mitigation using EDGE;
Building Resilience Index expands this work to climate change adaptation



Green buildings
Climate change mitigation



Resilient buildings
Climate change adaptation

The logo consists of five vertical bars of varying heights and colors: a small red bar, a medium orange bar, a tall yellow bar, a medium green bar, and a small light green bar.

Building Resilience Index



Identify Risk

based on the location of
your project



Manage Risk

as you design, build or
operate buildings



Disclose Risk

by presenting buildings'
letter grade resilience level

Building Resilience Index is an innovation of IFC, a member of the World Bank Group.

Identify risk

View location hazards

HAZARD LAYERS

- Geoseismic
- Earthquake
- Volcano
- Landslide
- Wind
- Water
- Fire

Applicable Hazards

- Earthquake** APPLICABLE
PEAK GROUND ACCELERATION: 170 cm/s²
- Tornado** APPLICABLE
- Cyclone** APPLICABLE
WIND SPEED: 67 km/h
- Urban Flood** APPLICABLE
- Wildfire** APPLICABLE

Navigation: [Previous](#) [Next](#)

Identify risk

WIND



Downburst
Tornado
Storm (cyclone, typhoon, hurricane)

WATER



Urban flooding
Tidal flooding
River/lake flooding
Flash flooding
Storm surge
Tsunami

FIRE



Local fire
Wildfire

GEO-SEISMIC



Volcano
Landslide
Earthquake




PHYSICAL INTEGRITY



OPERATIONAL CONTINUITY

Manage risk

 [X Exit](#) Edit Project: Affordable Housing Project - Sample Report [User Guide](#)

PROJECT RATING **C** ✓ Background ✓ Location 3 Mitigation Measures 1 Documents

Hazard Mitigation Measures

HAZARD CATEGORY

- Seismic** **C** ⊕
- Wind **C** ⊗
- Water **C** ⊗
- Fire **C** ⊗
- Operational continuity **-** ⊗

MITIGATION MEASURE

REQUIREMENT FOR RATING

GS01. 1 km Distance from Earthquake Fault or Seismically Designed/Built **C**

The building is either located at least 1 km away from an earthquake fault line or it is designed/built specific to the site's seismic properties.

Yes No N/A

Provide optional explanation

[← Previous](#) [Save](#) [Next category >](#)

Disclose risk

The **building fails to meet** the requirements of any of the above levels. **It will likely not survive** most applicable hazards, even at moderate level

The **building incorporates local building code requirements**, some of which may be outdated, and some recommended practices. It may survive some applicable hazards at a moderate level.

The **building incorporates local latest building code requirements** for all applicable hazards and many recommended good practices. It will likely survive some applicable hazards at a moderate-high level.

The **building incorporates global best practice mitigation measures** for all applicable individual hazards, which are generally set above the local building code. It will likely survive all applicable hazards at high level.

'A+' is equal to an 'A' with **operational continuity** measures

The building meets all level 'A' requirements, plus three or more measures of operational continuity.



* - Probable Maximum Loss (PML) current replacement cost, including structural and equipment, excluding operational costs

Disclose risk

Affordable Housing Project - Sample Report (Not verified)

PROPERTY	Project Name	Area	Budget
Project Name	Residential	33,290 m ²	\$490,000
Year Completed	2025	Area Covered (m ²)	\$1,000
Year Started	2023	Project Value (USD)	\$260,000
	Project Type	Design	

HAZARD OVERVIEW

Earthquake: APPLICABLE Risk Level: 170	Tornado: APPLICABLE	Cyclone: APPLICABLE Risk Level: 67
Urban Flood: APPLICABLE	Wildfire: APPLICABLE	Local Fire: APPLICABLE

MITIGATION MEASURES

MEASURE	RISK LEVEL
Waterproofing: Waterproofing is applied to all exterior walls and foundations to prevent water ingress.	Yes
Wind-Resistant Design: The building is designed to withstand high wind speeds.	No
Fire Protection: Fire-resistant materials are used for walls and ceilings.	Yes
Structural Integrity: The building is designed to meet local building codes.	Yes
Seismic Design: The building is designed to resist seismic activity.	No
Structural with Seismic Resistance: The building is designed to resist seismic activity.	No
Fire Detection Systems: Fire detection systems are installed in all rooms.	Yes
Fire Protection: Fire protection measures are implemented throughout the building.	Yes
Fire Protection: Fire protection measures are implemented throughout the building.	N/A
Fire Protection: Fire protection measures are implemented throughout the building.	N/A
Fire Protection: Fire protection measures are implemented throughout the building.	No

Publish project

Public projects are eligible to be included in the Building Resilience Index, which provides a global overview of project performance. Projects are included in the index based on their location, size, and risk level.

Publish as public project

Share project

Individuals can share their project information, including verification, to help other users understand project performance. Sharing is done through a secure, encrypted channel.

Request verification

A project that is not verified can be verified by a professional engineer. Engineers must follow the verification process and provide a report to the Building Resilience Index. Verification is required for projects to be included in the index.

Project assessment report can be used for documentary submissions.

Developers can decide to:

- Publish,
- Share, or
- Verify

Who's using BRI

- 1.86 million sqm of space pledged under Building Resilience Commitment
- 41 projects
- Including 9,700 housing units



Developer

Projects/Building Typology)

CFA



10 Projects
8,553 Residential units

291,638 sqm



2 Projects
44 Residential Units

3,246 sqm



1 Campus
22 Academic Buildings

29,040 sqm



5 Projects
5 Office and Mixed-use Buildings

352,918 sqm



2 Projects
643 Residential Units

39,081 sqm



2 Projects
2 Office Buildings

111,295 sqm



7 Projects
7 Office Buildings

421,192 sqm



6 Projects
6 Residential & Mixed-use Buildings

214,525 sqm



5 Projects
5 Retail Buildings

393,562 sqm

Case study:
Imperial Homes
portfolio EDGE
certification and
BRI assessment



Via Verde Batangas

- Imperial Homes uses 'Connovate' technology developed for fast and quality construction.
- Company worked on Net Metering rules which make even stronger case for solar powered homes, as home-owners can sell back to grid.
- Imperial Homes is certifying their units through a simplified portfolio approach, utilizing similarities in design.
- Measures include solar panels, low WWR, precast panel technology, low-flow faucets.

Utility savings

*allows homebuyers
to start their own
micro enterprises*

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Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Economic Affairs,
Education and Research EAER
State Secretariat for Economic Affairs SECO

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Kingdom of the Netherlands



Australian Government



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