



*Creating Markets, Creating Opportunities*

# UNLOCKING INVESTMENTS FOR GREEN & RESILIENT HOTELS

## WEBINAR 2: INTRO TO EDGE



# Using our collective power across the value chain to deliver impact locally and on a global scale



7 million  
rooms

50,000  
hotels

CEOs  
and C-Suite

Strategic partners



Knowledge partners



Supplier partners

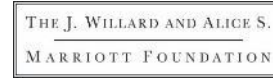


Delivery partners



Sightsavers TENT

Funding partners



Implementing partners



# NetPositiveHospitality



## Prosperity

Ensuring economic successes and opportunities benefit all



## Planet

Replenishing resources and restoring biodiversity for a thriving natural world



## Place

Working in harmony with our communities and habitats



## People

Respecting and enriching the lives of all our people

# The business case for sustainable hotels



Boost profit margins through utility savings



Increase revenue through satisfying consumer preference



Future proof investment strategies



Regulatory risks and benefits

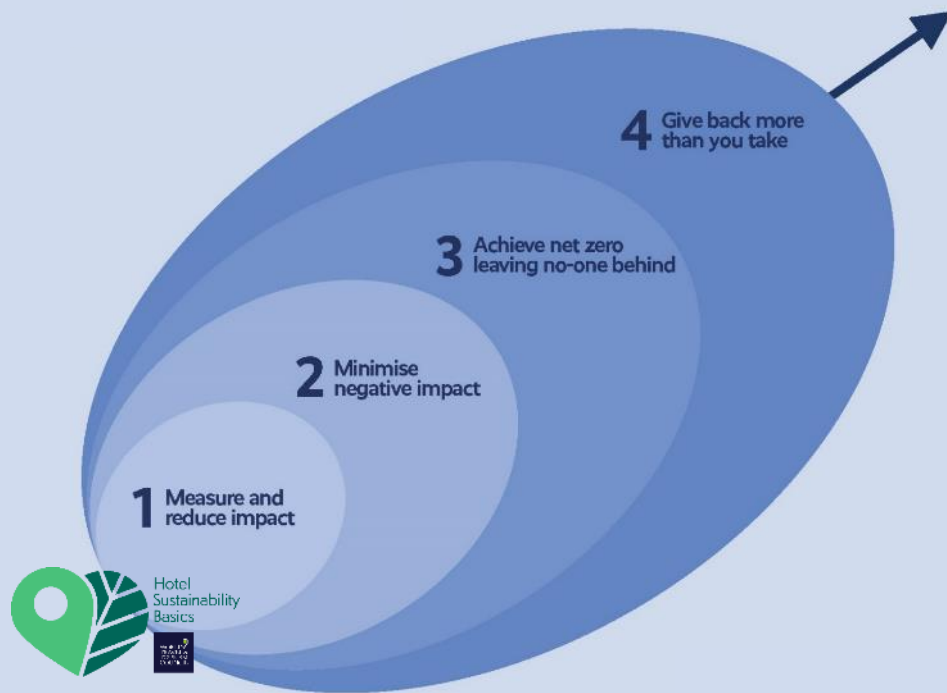


Increase value through certification



Ensure a long-term energy supply

# Pathway to NetPositiveHospitality



## Environmental

- Resource use and pollution
- Protection and regeneration of nature

## Social

- Fairness in the workplace
- Equitable and better opportunities
- Community partnerships and support
- Customer welfare

## Governance

- Stakeholder engagement
- Management and compliance
- Commitments and reporting



For guidance please see the 'Instructions' tab

Filter to find relevant actions

Issue	Action category	Action	Stakeholder relevance				Type of solution	Cost	Ease of doing	Potential impact	Related departments													
			Brand	Operator	Asset owner						Engineering	Food and Beverage	Front desk	GM / Leadership	Housekeeping	HR	Meeting rooms	Procurement						
					New-build and renovations	Existing buildings																		
Climate Action	Energy efficiency	Install LED lighting		Y	Y	Y	Technical	Low/no cost	Easy	Low	x			x									x	
Climate Action	Energy efficiency	Install smart ventilation in kitchens			Y	Y	Technical	High cost	Medium	Medium	x	x		x										x
Climate Action	Energy efficiency	Install solar film on windows		Y	Y	Y	Technical	Medium cost	Easy	Medium	x			x										x
Climate Action	Energy efficiency	Install double or triple glazed windows			Y	Y	Technical	High cost	More difficult	Medium	x			x										x
Climate Action	Energy efficiency	Install automated lighting controls, such as occupancy or daylight sensors			Y	Y	Technical	Medium cost	Medium	Medium	x			x										x
Water Stewardship	Water efficiency	Intall water efficient showers eg. smart showers or low-flow shower heads (<9 liters/min)		Y	Y	Y	Technical	Low/no cost	Easy	Medium	x			x										x
Water Stewardship	Team engagement	Educate employees about water-related issues and any water-saving initiatives in place	Y	Y			Operational	Low/no cost	Easy	Medium											x			
Water Stewardship	Guest engagement	Allow guests to opt-out of room cleaning and ensure adequate team training	Y	Y			Operational	Low/no cost	Easy	Medium				x			x	x						
Waste & Circular Economy	Single use items	Eliminate single-use plastic straws and stirrers. Offer disposables only on request	Y	Y			Operational	Low/no cost	Easy	Medium		x				x						x	x	
Waste & Circular Economy	Waste management	Have recycling plan in place for glass, paper, plastic and organic and ensure employees are trained		Y			Operational	Low/no cost	Easy	High	x										x			
Waste & Circular Economy	Team engagement	Educate employees about waste issues and any waste management initiatives in place		Y			Operational	Low/no cost	Easy	Medium											x			
Waste & Circular Economy	Consumption reduction	Reduce printing requirements	Y	Y			Operational	Low/no cost	Easy	Medium	x	x	x	x	x	x	x	x	x	x				x
Waste & Circular Economy	Consumption reduction	Practice portion control	Y	Y			Operational	Low/no cost	Easy	Medium		x											x	
Waste & Circular Economy	Consumption reduction	Opt for high quality, durable options where possible	Y	Y	Y	Y	Operational	Low/no cost	Easy	Medium														x
Biodiversity	Purchasing	Purchase items of high animal welfare standards	Y	Y			Operational	Low/no cost	Easy	Medium		x												x
Biodiversity	Purchasing	Ban the purchase of products created from endangered/non-sustainable species	Y	Y			Operational	Low/no cost	Easy	High		x												x
Biodiversity	Purchasing	Purchase produce with a reputable certification	Y	Y			Operational	Low/no cost	Easy	Medium	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Biodiversity	Team engagement	Educate employees about biodiversity issues and the natural heritage of the local area		Y			Operational	Low/no cost	Easy	Medium											x			

# GRIP: Greening Real Estate Investment Portfolios

## A TWO-STEP PROCESS

1

### STRATEGY

#### Developing a portfolio decarbonization and investment plan

- Baseline assessment of the entire portfolio
- Green guidelines for new developments and acquisitions
- Define corporate-level climate ambitions
- Develop a comprehensive decarbonization pathway, with clear interim KPIs
- Create a financing plan supporting the green transition

2

### IMPLEMENTATION

#### IFC financing to support the green transition

- IFC provides investment in the form of green/ sustainability-linked loans or other products
- The sponsor agrees to report the use of proceeds and progress in achieving agreed interim targets





*Creating Markets, Creating Opportunities*

# EDGE for Green Hotels

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

*EDGE is an innovation of IFC, a member of the World Bank Group.*

# IFC's Approach to Green Building Growth



# EDGE: Excellence in Design for Greater Efficiencies

1.

**Free Software**



Further Resource: [EDGE Software Demo](#)

2.

**Achievable Standards**



3.

**Verified Green Label**



Case study:  
Villas in Phuket  
achieved 54%  
Energy saving



### La Vista Villas statistics

- Located on the island of Phuket, the project is comprised of 11 villas of 3 types: two-story, three-story and four-story.
- The project reduced energy consumption through measures such as insulation of roofs, ceiling fans in habitable areas, high COP air-conditioning systems, and energy-saving lightbulbs, while also achieving a reduction in water consumption and embodied energy with low-flow water fixture and AAC blocks.

Predicted Savings of  
EDGE Certification

*La Vista Villas*

**54%**

Energy Savings

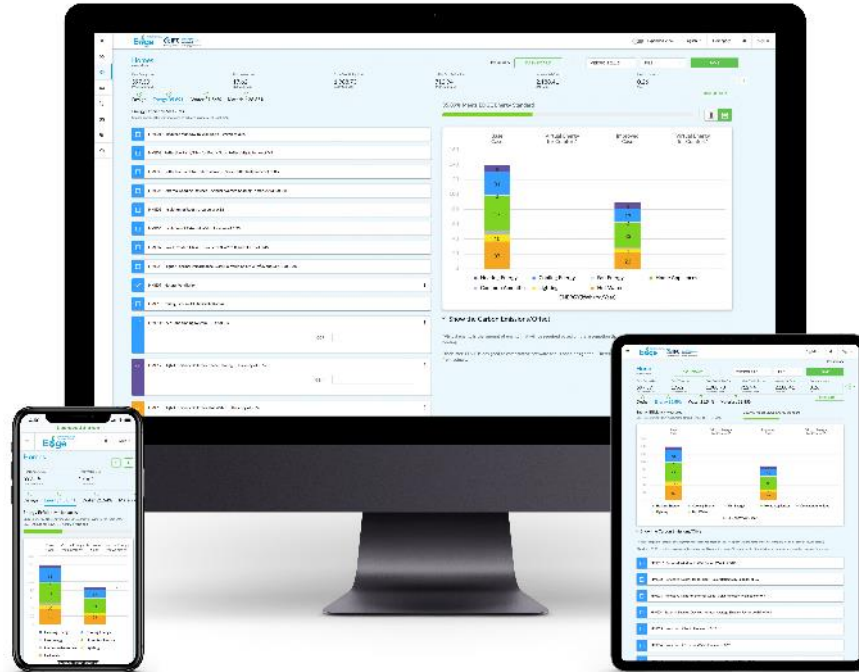
**29%**

Water Savings

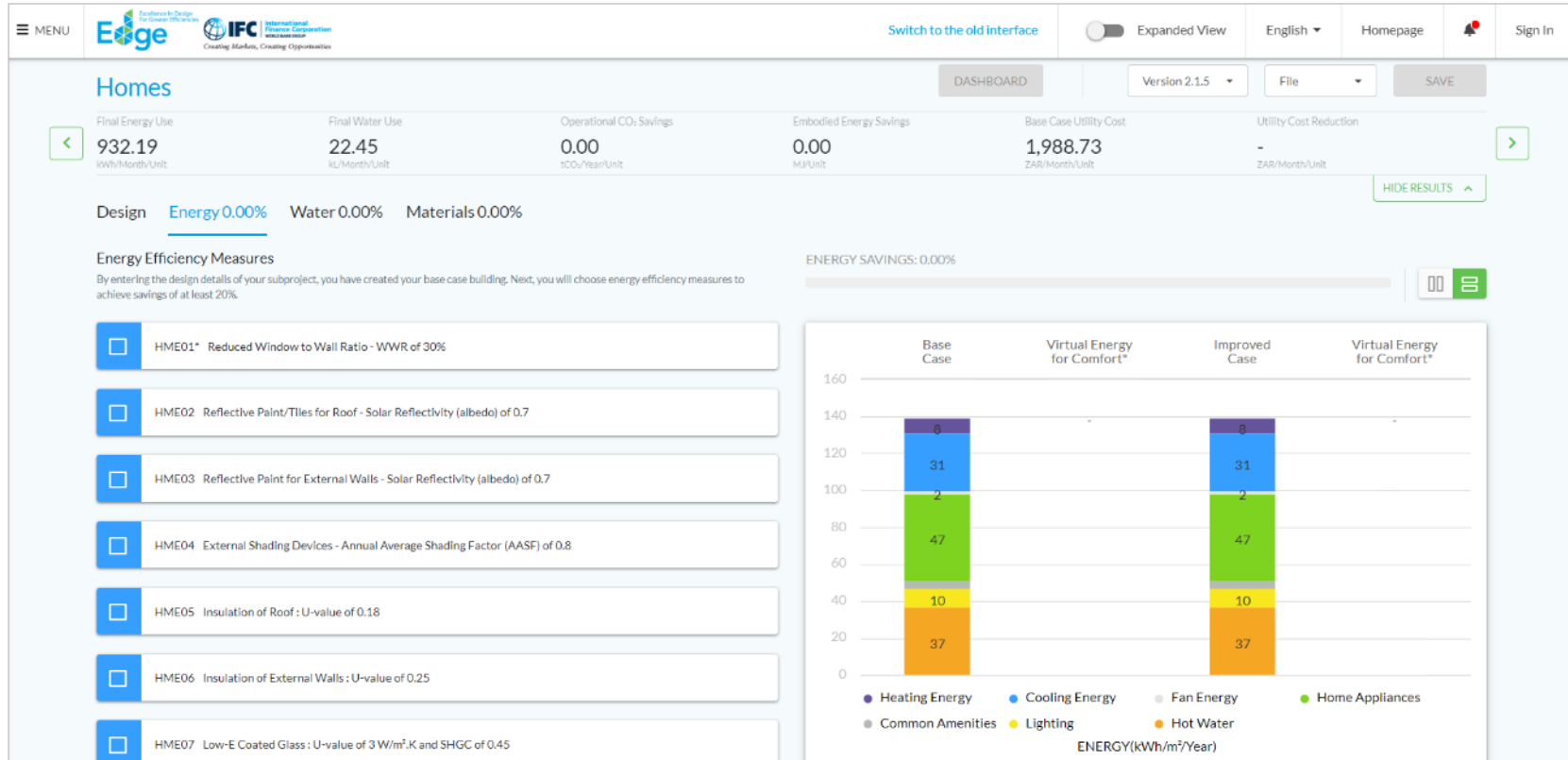
**36%**

Less Embodied Energy in Materials

# The Free Software Shows Return on Investment for Resource Efficiency Measures, Tailored to Local Climate

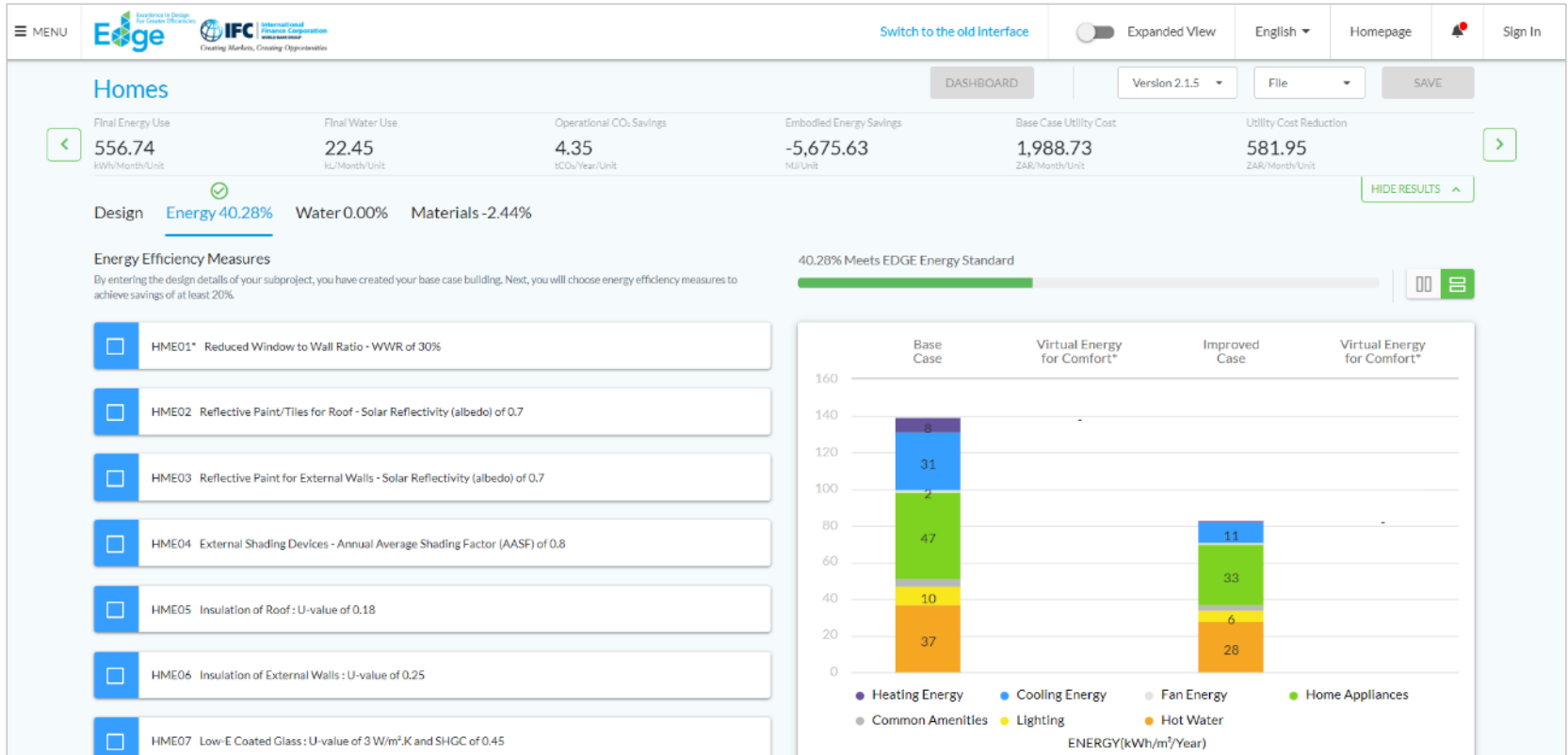


# EDGE Compares Your Green Building to a Conventional Building





# Choose Green Building Strategies and Calculate their Financial and Environmental Impacts



# EDGE is different from other certification systems



## International Acclaim

Integration of the EDGE brand into your marketing efforts distinguishes your projects and brings global prestige.



## Cost Calculator

EDGE helps you to decide the best green options and estimate the incremental cost (typically less than 2%).



## Focus on Resource Efficiency

EDGE focuses on energy, water, and embodied energy in materials, for a quantitative approach.



## Bio-Climatic Modeling

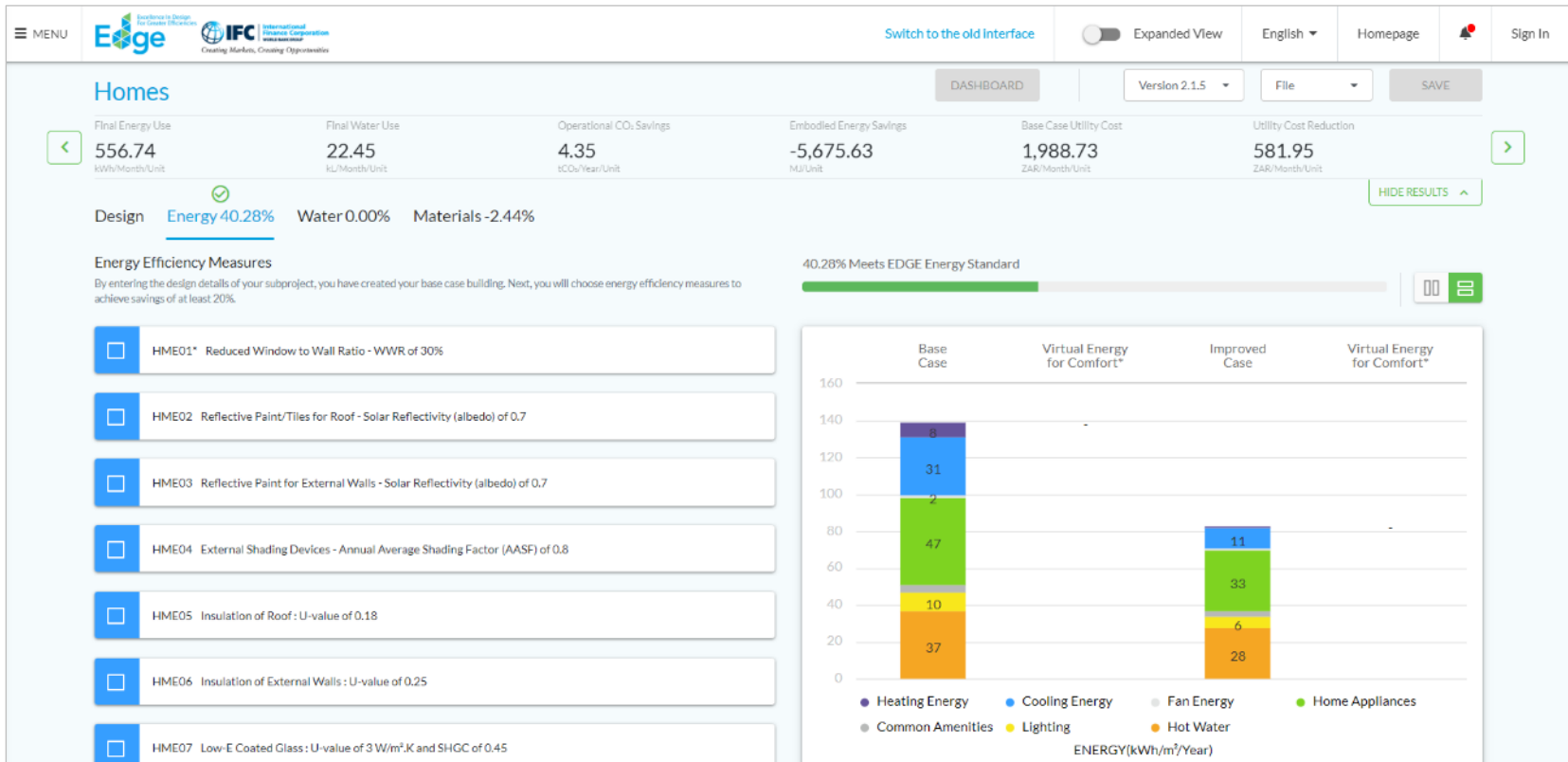
EDGE is location-specific, with climate and lifestyle data for thousands of cities.



## Streamlined Process

A shorter certification workflow saves you time, with most required documentation already on hand.

# EDGE Demo

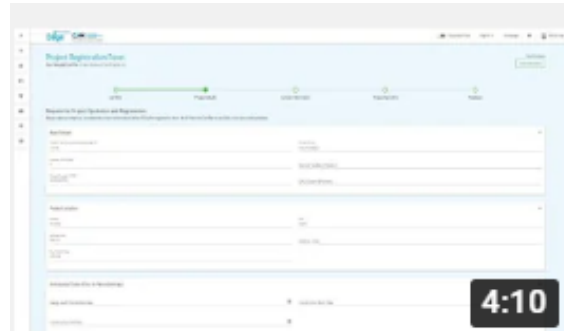


# EDGE Demo



5:46

How to Meet the EDGE  
Standard (best viewed at...



4:10

How to Register a Project  
(best viewed at 1080p)



5:44

How to Certify a Project (best  
viewed at 1080p)



Further resource:

[EDGE YouTube Channel](#)

## There are Three Levels of EDGE Certification



### Level 1 - EDGE Certified

20% or more savings in energy, water, and embodied energy in materials.



### Level 2 - EDGE Advanced

EDGE certified with 40% or more on-site energy savings.



### Level 3 - Zero Carbon

EDGE Advanced with 100% renewables or purchased carbon offsets.

# EDGE is Available in a Variety of Building Typologies





# Retrofit Process: First model the building as is

Hospitality
DASHBOARD
VERSION 2.1.5
FILE
SAVE

Final Energy Use  
510,543  
kWh/Month

Final Water Use  
3,437  
m<sup>3</sup>/Month

Base Case Utility Cost  
36,164.86  
\$/Month

Utility Cost Reduction  
-5,256.90  
\$/Month

Incremental Cost  
-135,692.21  
\$

Payback in Years  
N/A  
Yrs.

Design Energy -15.53% Water -13.38% Materials 0.00%

Energy Efficiency Measures  
Choose energy efficiency measures to achieve savings of at least 20%.

- HTE01\* Reduced Window to Wall Ratio - WWR of 40%
- HTE02 External Shading Devices - Annual Average Shading Factor (AASF) of 0.61
- HTE03 Insulation of Roof : U-value of 2 W/m<sup>2</sup>.K
- HTE04 Insulation of External Walls : U-value of 2 W/m<sup>2</sup>.K
- HTE05 Low-E Coated Glass : U-value of 3 W/m<sup>2</sup>.K and SHGC of 0.45
- HTE06 Higher Thermal Performance Glass : U-value of 1.98 W/m<sup>2</sup>.K and SHGC of 0.28
- HTE07 Natural Ventilation - Corridors
- HTE08 Natural Ventilation - Guest Rooms/Apartment Area with Auto Controls
- HTE09\* Variable Refrigerant Volume (VRV) Cooling System - COP of 3.5
- HTE10\* Air Conditioning with Air Cooled Screw Chiller - COP of 2 COP
- HTE11\* Air Conditioning with Water Cooled Chiller - COP of 5.39
- HTE12\* Ground Source Heat Pump - COP of 4.1

**-15.53% ENERGY SAVINGS**

Category	Base Case (kWh/m <sup>2</sup> /Year)	Improved Case (kWh/m <sup>2</sup> /Year)
Heating Energy	118	157
Cooling Energy	20	20
Fan Energy	46	46
Pump Energy	49	49
Other	26	31
Laundry	22	22
Lighting	22	22
Water Heating	22	22
<b>Total</b>	<b>338</b>	<b>287</b>

ENERGY(kWh/m<sup>2</sup>/Year)

Legend: Heating Energy (dark blue), Cooling Energy (light blue), Fan Energy (grey), Pump Energy (green), Other (grey), Laundry (light green), Lighting (yellow), Water Heating (orange), Catering (dark red).

▼ Show the Carbon Emissions/Offset

Without energy is the amount of energy that will be required based on the assumption that the model will eventually install air conditioning or heating.

Disclaimer: EDGE is designed as comparative software and is not a design tool. Therefore predicted results for energy, water and materials may vary from actuals.

# ... then model the retrofit

## Hospitality

**DASHBOARD** | VERSION 2.1.5 | FILE | **SAVE**

Final Energy Use 337,509 kWh/Month	Final Water Use 3,052 m <sup>3</sup> /Month	Base Case Utility Cost 36,164.86 \$/Month	Utility Cost Reduction 4,466.92 \$/Month	Incremental Cost 221,494.56 \$	Payback in Years 4.13 Yrs.
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Design **Energy 23.62%** Water 17.46% Materials -2.23%

### Energy Efficiency Measures

Choose energy efficiency measures to achieve savings of at least 20%.

- HTE01\* Reduced Window to Wall Ratio - WWR of 40%
- HTE02 External Shading Devices - Annual Average Shading Factor (AASF) of 0.61  
AASF:
- HTE03 Insulation of Roof : U-value of 0.44  
W/m<sup>2</sup>.K:
- HTE04 Insulation of External Walls : U-value of 2  
W/m<sup>2</sup>.K:
- HTE05 Low-E Coated Glass : U-value of 3 W/m<sup>2</sup>.K and SHGC of 0.45
- HTE06 Higher Thermal Performance Glass : U-value of 1.98 W/m<sup>2</sup>.K and SHGC of 0.28  
[W/m<sup>2</sup>.K]:  SHGC:
- HTE07 Natural Ventilation - Corridors
- HTE08 Natural Ventilation - Guest Rooms/Apartment Area with Auto Controls
- HTE09\* Variable Refrigerant Volume (VRV) Cooling System - COP of 3.5
- HTE10\* Air Conditioning with Air Cooled Screw Chiller - COP of 3.2
- HTE11\* Air Conditioning with Water Cooled Chiller - COP of 6  
COP:

### 23.62% Meets EDGE Energy Standard

Category	Base Case (kWh/m <sup>2</sup> /Year)	Improved Case (kWh/m <sup>2</sup> /Year)
Heating Energy	118	30
Cooling Energy	20	12
Fan Energy	46	46
Pump Energy	49	49
Other	26	22
Laundry	27	27
Lighting	26	22
Water Heating	26	22
Catering	27	27
<b>Total</b>	<b>350</b>	<b>250</b>

ENERGY(kWh/m<sup>2</sup>/Year)

Legend: Heating Energy, Cooling Energy, Fan Energy, Pump Energy, Other, Laundry, Lighting, Water Heating, Catering

▼ Show the Carbon Emissions/Offset

\*Virtual energy is the amount of energy that will be required based on the assumption that the hotel will eventually install air conditioning or heating.

Disclaimer: EDGE is designed as comparative software and is not a design tool. Therefore predicted results for energy, water and materials may vary from actuals.

# Future versions of EDGE will allow more fine-tuning of cost assessment

Expanded View
English ▾
Homepage
🔔
Sign In

**Office** DASHBOARD

VERSION 3.0.0 FILE ▾ SAVE

Final Energy Use  
**125,505.13**  
kWh/Month

Final Water Use  
**1,008.16**  
m<sup>3</sup>/Month

Final Operational CO2 Emission  
**97.41**  
tCO<sub>2</sub>/Year

Final Embodied Energy  
**2,160.58**  
MJ/m<sup>2</sup>

Final Utility Cost  
**2,357,129.34**  
RSD/Month

Total Subproject Floor Area  
**10,000.00**  
m<sup>2</sup>

Design Energy 0.03% Water 11.89% Materials 0.00%

**Water Efficiency Measures**  
Choose water efficiency measures to achieve savings of at least 20%.

**Water Efficiency Measures**

**WEM01 Low Flow Showerheads - 6 Lt./min**  
Baseline Flow : 8 l./min

Hot water Provis... **Yes** ▾

Avg No of Showe...  L/min

Incremental Cost - RSD

Default  User Entry

**WEM02 Low Flow Faucets for Private Bathrooms - 2 Lt./min**  
Baseline Flow : 6 Lt./min

Faucet Type **Faucets with A...** Hot water Provis... **No** ▾

L/min

Incremental Cost - RSD

Default  User Entry

**WEM03 Low Flow Faucets for Public Bathrooms - 2 Lt./min**  
Baseline Flow : 6 l./min

Faucet Type **Faucets with A...** Hot water Provis... **No** ▾

L/min

Incremental Cost - RSD

Default  User Entry

**WEM04 Low Flow Water Closets for Private Bathrooms - 6 L/first flush and 3 L/second flush**

**WEM05 Low Flow Water Closets for Public Bathrooms - 6 L/first flush and 3 L/second flush**

**11.89%** Water Efficiency Measures

Category	Base Case	Improved Case
Shower	7	2
Irrigation	12	12
Wash Basin	11	11
HVAC	6	6
Flushing	0	0
Swimming Pool	0	0
Cleaning & Washing	0	0
Kitchen	0	0
Laundry	0	0
Equipment	0	0
Car Washing	0	0
<b>Total</b>	<b>36</b>	<b>27</b>

Water (Lts/Day/Person)

Disclaimer: EDGE is designed as comparative software and is not a design tool. Therefore, predicted results for energy, water and materials may vary from actuals.

# EDGE website has a library of case studies of certified projects



[Hilton Cucuta \(COL\)](#)  
By Hilton



[Ascott Makati \(PHL\)](#)  
By the Ascott



[Fiesta Americana \(MEX\)](#)  
By Grupo Posadas and Fibra



[Eco Green Hotel \(VNM\)](#)  
By Công ty TNHH TM & DV Anh Mỹ



[Springhill Condotel \(IDN\)](#)  
By Springhill Group



[AC Hotel by Marriott \(MEX\)](#)  
By Grupo Posadas and Fibra



[Fairfield by Marriott \(IND\)](#)  
By SAMHI



[101 Bogor Suryakencana \(IDN\)](#)  
By Panoramaland



[Faranda \(COL\)](#)  
By Argenaria SAS



[Accor Ibis \(COL\)](#)  
By Arquitectura y Concreto

# Projects can be Certified Anywhere Around the World

EDGE-certified projects can be found in 85 countries



Case study:  
Sheraton Belitung  
Resort  
Indonesia



### Sheraton Belitung Resort

- Sheraton Belitung Resort is an eco-concept resort development on Belitung Island, Indonesia.
- The resort will utilize resource-efficient design features and technologies to reduce its environmental impact and lower its carbon footprint.
- LED lighting, a variable refrigerant cooling system and a heat pump for hot water generation will be installed to reduce the resort's energy use by almost half. Dual-flush water closets, low-flow showerheads and water-efficient landscaping will be used to reduce the resort's water use.

Predicted Savings of  
EDGE Advanced Certification

**46%**

Energy Savings

**36%**

Water Savings

**56%**

Less Embodied Energy in Materials



## Case study: Hampton by Hilton Quito



### Hampton by Hilton Quito statistics

- Hampton by Hilton Carolina Park is a 12-story hotel in Quito's financial district.
- LED lighting, an energy-efficient cooling system, and a heat pump for hot water generation will contribute to the building's energy savings, while water-efficient and low-flow plumbing fixtures will contribute to the building's water savings.

Predicted Savings of  
EDGE Certification  
*Hampton Quito*

**54%**

Energy Savings

**37%**

Water Savings

**44%**

Less Embodied Energy in Materials

# Green Building Standards to access International Green Finance

## Finance Standards



## Reporting Standards



G R E S B



## CERTIFIED GREEN

*Verified by a third party, using internationally recognized certification standards*



## BETTER PERFORMANCE COMPARED TO BASELINE

*Quantifiable approach to building design and operations*



## IMPACT REPORTING

*Able to report energy, water, and GHG impacts*

*Further resource: [Green Buildings – A Financial and Policy Blueprint for Emerging Markets](#)*

Case study:  
The Ascott Limited  
adopted EDGE for  
hundred projects  
worldwide



### Somerset Grand Hanoi

- As a leading international lodging owner-operator, green buildings is one of Ascott's focus areas, as reflected in its commitment to certify all new buildings and major retrofits.
- The existing hotel located in Hanoi was retrofitted to improve its resource efficiency.
- CapitaLand (CLAS), parent company of Ascott, raised \$150 million in a sustainable-linked bond with IFC.
- CLAS has raised about \$450 million in sustainable financing.

Final Savings of  
EDGE Certification  
*Somerset Grand Hanoi*

**28%**

Energy Savings

**48%**

Water Savings

**88%**

Less Embodied Energy in Materials

# Booking.com - Sustainability as a Marketing Tool

## CERTIFICATION MATTERS!

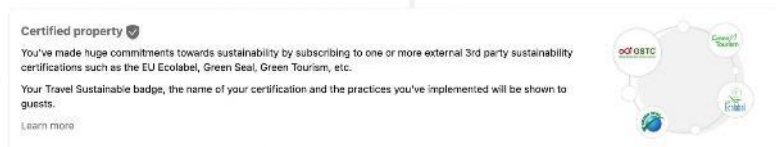
To receive the highest level of recognition as part of the Travel Sustainable program, these accommodations are recognized with a certified badge, including the name of their certification

### A guide to Travel Sustainable Levels

Add practices to bring your property closer to reaching the next level and attract attention from the 70% of travellers\* who told us that they're more likely to choose an accommodation if they know it's sustainable.



What about sustainability certifications?





**Breakfast included**

2 Bedroom Executive Living Room

**Ascott Makati** Very Good 8.4

Makati, Manila [Show on map](#) 20 feet from map center

🌿🌿🌿 Travel Sustainable Level 3

**Deluxe Two-Bedroom Apartment**

Private suite • 2 bedrooms • 2 bathrooms • 113m<sup>2</sup>  
2 beds (1 king, 1 queen)

**Breakfast included**

1 week, 2 adults  
**\$2,435**

[See availability >](#)



**Breakfast included**

**Ascott Bonifacio Global City Manila** Wonderful 9.0

Taguig, Manila [Show on map](#) 1.4 miles from map center

🌿🌿🌿 Travel Sustainable Level 3

**One-Bedroom Executive**


Entire apartment • 1 bedroom • 1 kitchen • 63m<sup>2</sup>  
1 queen bed

**Breakfast included**

**Only 2 left at this price on our site**

1 week, 2 adults  
**\$2,070**

[See availability >](#)



**AC Hotel by Marriott Veracruz** Very Good 8.3

Veracruz [Show on map](#) 4.9 miles from center Beach Nearby

[700 feet from beach](#)

🌿🌿🌿 Travel Sustainable Level 2

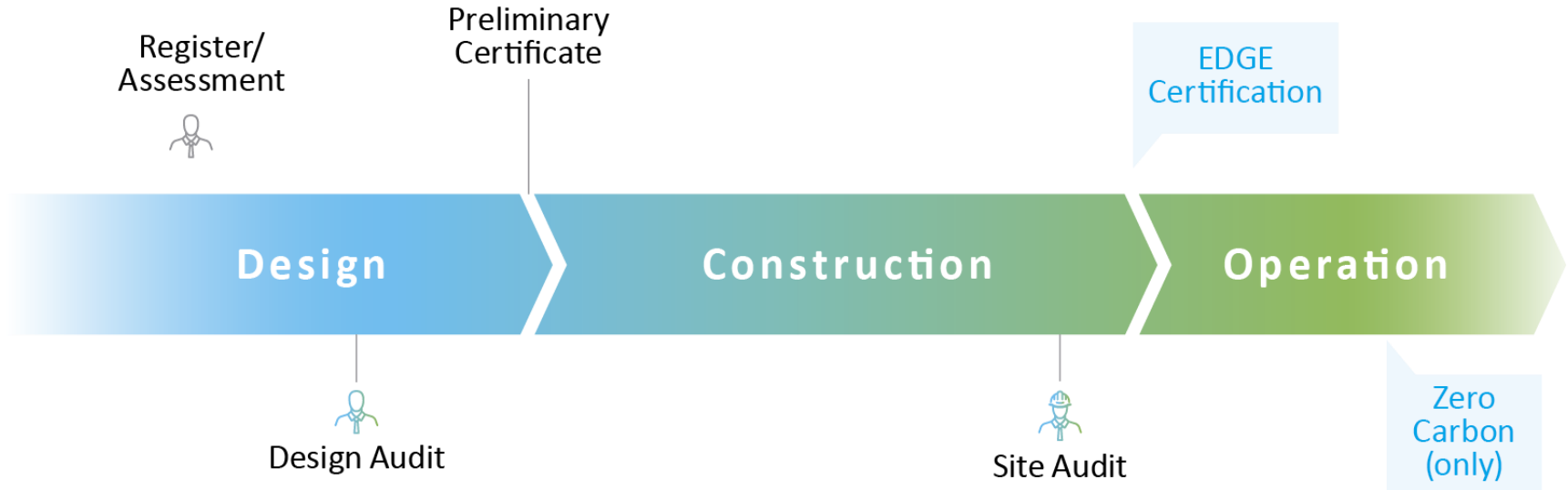
**Guest Room with Two Double Beds and City View**

2 full beds

1 week, 2 adults  
**\$588**

[See availability >](#)

# The Certification Flow has Two Steps that are Repeated at Post-construction



# Each Project Receives a Certificate, with Plaques and Decals Available



**Certified Green**



**EDGE Advanced**



**Zero Carbon**





# The Certification Flow Has Three Steps



## STEP 1: Register

Design your project in the EDGE App and click apply for certification. Hire an auditor directly or request a certifier to assign one. The certifier will follow up to confirm certification pricing.



## STEP 2: Certify

Once your project is registered, upload your documentation into the EDGE App. When you're ready, go to your dashboard and initiate the certification workflow.



## STEP 3: Validate

After you've received a preliminary certificate, repeat Step 2 at the post-construction stage, uploading any fresh design changes and documentation to the EDGE App.

# EDGE Expert Training



## Local Training

Local training is provided in a classroom environment by licensed training providers.

**Cost:** Varies

**Length:** One day of eight hours



## Online Training

Online training is provided in English or Spanish and can be taken at your own time and pace.

**Cost:** up to \$150

**Length:** Five to six modules (approximately one hour each)



## Livestream Training

Livestream training is provided by accredited certifiers with virtual trainers leading the webcasts.

**Cost:** Varies

**Length:** Either two days of four-hour sessions or one day of an eight-hour session

# Hire an EDGE Expert

## Find an Expert

Interested in finding an EDGE Expert? EDGE Experts provide their services internationally.

EDGE Experts serve as trusted and experienced advisor, supporting clients in their decision-making as to the best ways to design and build green. They also have extensive knowledge of the EDGE software and certification process. While not required in order to achieve certification for project, EDGE Experts provide significant value to clients through their skills, insights and technical know-how.

[DOWNLOAD COMPLETE LIST OF EDGE EXPERTS](#)

Country

Colombia

Search



CLEAR RESULT



**Alejandra Arbelaez Bolaños**

Arquitecto Diseño

Colombia



in



**Alejandro Cruz Uribe**

General Manager

Colombia



in



**Alexandra Echeverry Mora**

Project Manager

Colombia



in



**Ana Camila Cárdenas Luna**

Civil Engineer



**Alejandra López Rios**

Arquitecta

Colombia



in



**Alejandro Lopez Agudelo**

Analista de Proyectos

Colombia



in



**Alvaro Antonio Fernandez Del Vecchio**

Ingeniero Mecanico

Colombia



in



**Ana María Buss**

Ingeniera Arquitecta

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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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