
EcoEdge AI®
windmason
BREATHE THE FINEST
ECOEDGE AI
Decarbonizing the Planet
One Building at a Time
UAE | Oman | Saudi Arabia | Bahrain

WHAT WE DO

We make HVAC systems green, sustainable & highly effective

ACTIVE DEPLOYMENTS

FIVE PALM JUMEIRAH DUBAI

الحبتور ALHABTOOR

Radisson RED

park inn by Radisson DUBAI MOTOR CITY

PARK REGIS KRIS KIN HOTEL • DUBAI

HERIOT WATT UNIVERSITY

PLANNED DEPLOYMENTS

Radisson BLU DUBAI MEDIA CITY دبي ميديا سيتي

DELTA HOTELS MARRIOTT JUMEIRAH BEACH DUBAI

JBC MANAGEMENT DMCC جيه بي سي مانجمنت م.د.م.س

TRYP BY WYNDHAM

H Rotana

DIFC

SHIFT TOWARDS DECARBONIZATION

Commitments to net-zero carbon dioxide (CO2) or GHG emissions targets cover 88% of countries' emissions:

- UAE – 40% reduction in carbon emissions by 2030
- KSA – Reduction of 278 mtpa CO2E emissions by 2030
- Qatar - 25% reduction in GHG emissions by 2030
- Oman - 21% reduction in GHG emissions by 2030
- Bahrain – 30% reduction in CO2E emissions by 2035
- Kuwait – 7.4% reduction in CO2E emissions by 2035

THE WAY FORWARD

Enhancing energy efficiency by employing superior technology:

ANNUAL INVESTMENT IN ENERGY EFFICIENT BUILDINGS FROM 2017 TO 2022, AND NET ZERO FORECAST FROM 2026 TO 2030, IN USD BILLION, WORLDWIDE

Our way

Employ ML to learn about usage patterns, feed key data through external sources and enable AI to make data centric decisions to achieve HVAC efficiency

Our users

Malls, hospitals, airports, factories, hotels, and residential, industrial and commercial buildings around the world

↓ Energy bills

↓ Carbon footprint

↑ Comfot

↓ Operational problems

OUR TECHNOLOGY

Leveraging AI to optimize HVAC operations

Specifications

Equipped with World's Smallest AI Supercomputer: Jetson Xavier NX

Certifications

CE/FCC Class A certifications

Connectivity

Built-in IOs such as USB, Ethernet, HDMI, DIO, COM/CANBUS

Communication

Supports Bacnet Protocol. Serial communication via RS485/RS232 also supported

Software Integration

Linux based Device OS. User IP based interface provided. Internet connectivity through USB Dongle or Internet via VPN for future updates

Visualizations

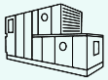
Visualization for zone conditions, zone setpoints, future predictions and energy savings

OUR SOLUTION

Data Acquisition and Pattern Learning for HVAC through BAS

Chillers

CHW In/Out
Ambient Temperature
Power Consumption
Cooling Load Demand



AHUs

Zone Temperature
Setpoint Temperature
Return Air Temperature
CHW In/Out
Valve Position
Occupancy
Pressure Setpoint
Fan VFD Hz

FCUs

Zone Temperature
Setpoint Temperature
Return Air Temperature
CHW In/Out
Valve Position
Occupancy

VAVs

Zone Temperature
Setpoint Temperature
Damper Position
Occupancy

CAVs

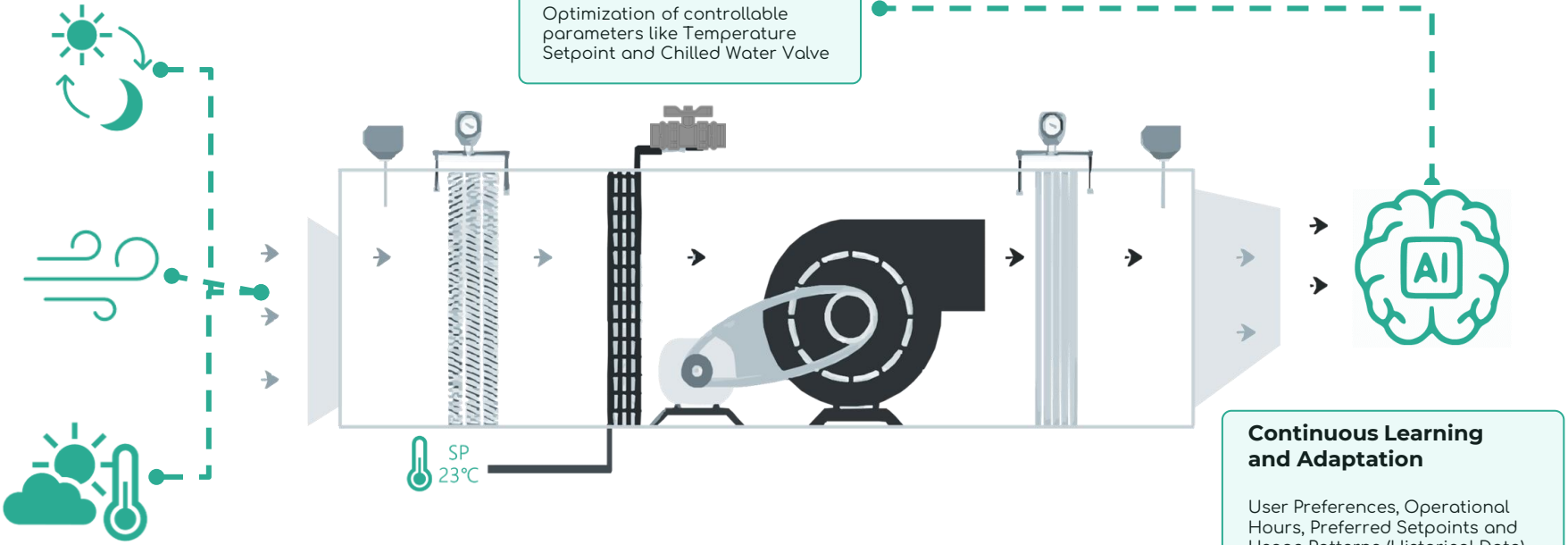
Zone Temperature
Setpoint Temperature

AI-based Future Predictions and Optimization of HVAC

SAVINGS OPPORTUNITY

Parameters Optimization

Optimization of controllable parameters like Temperature Setpoint and Chilled Water Valve



Dynamic Parameters

Time of Day, Return Air Temperature and Outside Weather

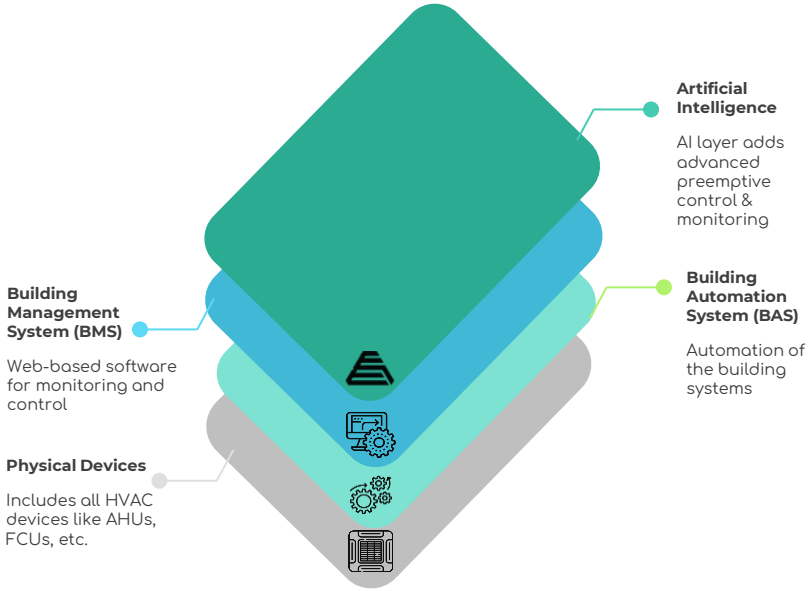
Continuous Learning and Adaptation

User Preferences, Operational Hours, Preferred Setpoints and Usage Patterns (Historical Data)

VALUE PROPOSITION

Reactive vs. Proactive

Feature	Conventional BMS (Reactive Approach)	EcoEdge AI (Proactive Approach)
Data Collection	✗ Limited	✓ Continuous
Data Analysis	✗ Minimal analysis	✓ AI-based predictions
Autonomous	✗ Manual adjustments	✓ AI-based actions
Energy Usage	✗ Energy wastage	✓ Dynamic optimization
System Learning	✗ Fixed rules-based	✓ Continuous learning and adaptation
Occupant Comfort	✗ Manual adjustments	✓ Auto-adjustments
Energy Efficiency	✗ Decreases with time	✓ Improves with time
Carbon Emissions Reduction	✗ No active focus	✓ Reduces energy waste and emissions

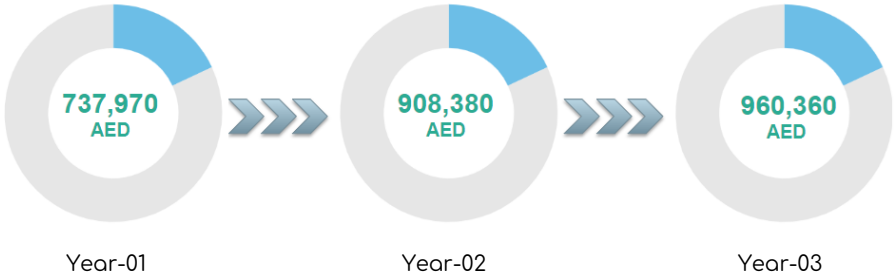


CASE STUDY

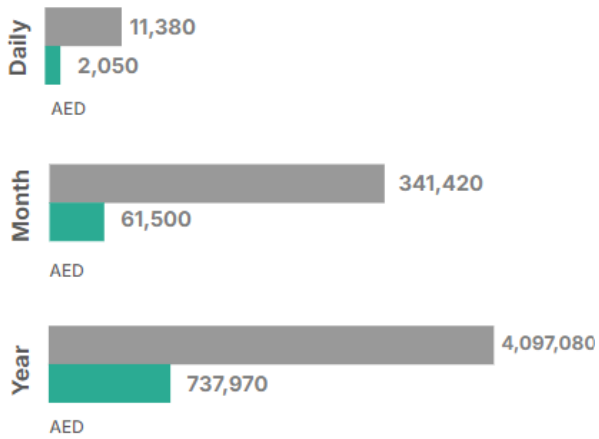
Luxury Hotel

	Reduction in Energy Consumption	Annual Reduction in CO2 Emissions
Year-01	18.01%	622.72 MT
Year-02	22.17%	766.18 MT

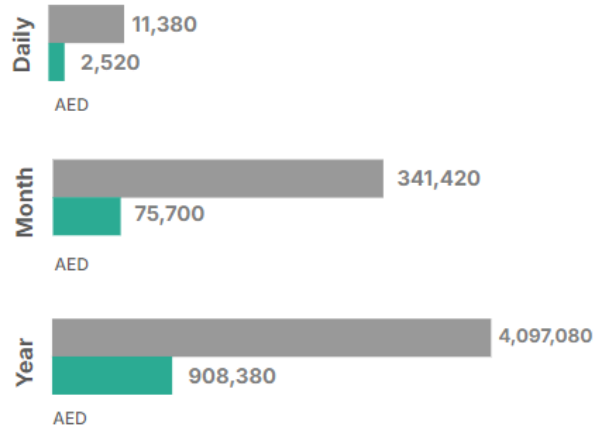
Projected Yearly Savings Potential



Projected Savings Potential for Year-01



Projected Savings Potential for Year-02

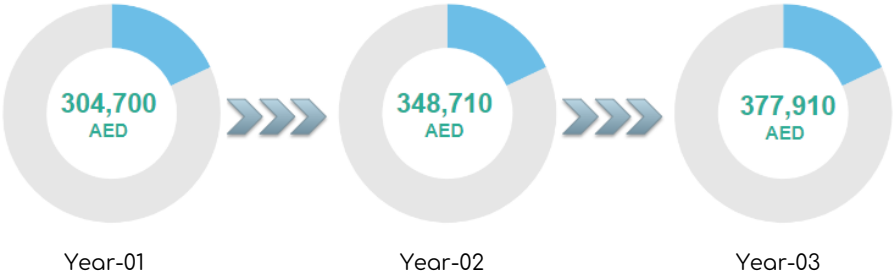


CASE STUDY

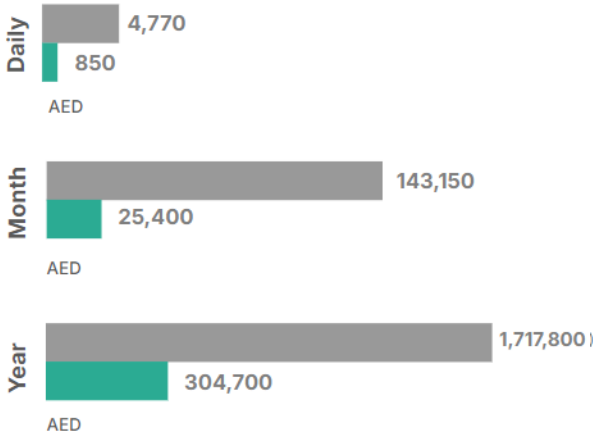
Residential Tower

	Reduction in Energy Consumption	Annual Reduction in CO2 Emissions
Year-01	17.74%	189.00 MT
Year-02	20.30%	194.10 MT

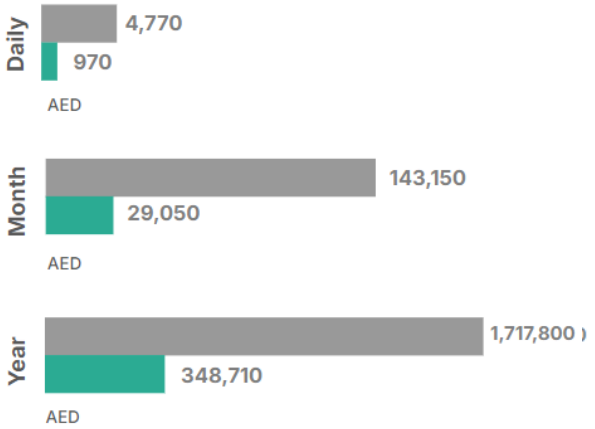
Projected Yearly Savings Potential



Projected Savings Potential for Year-01



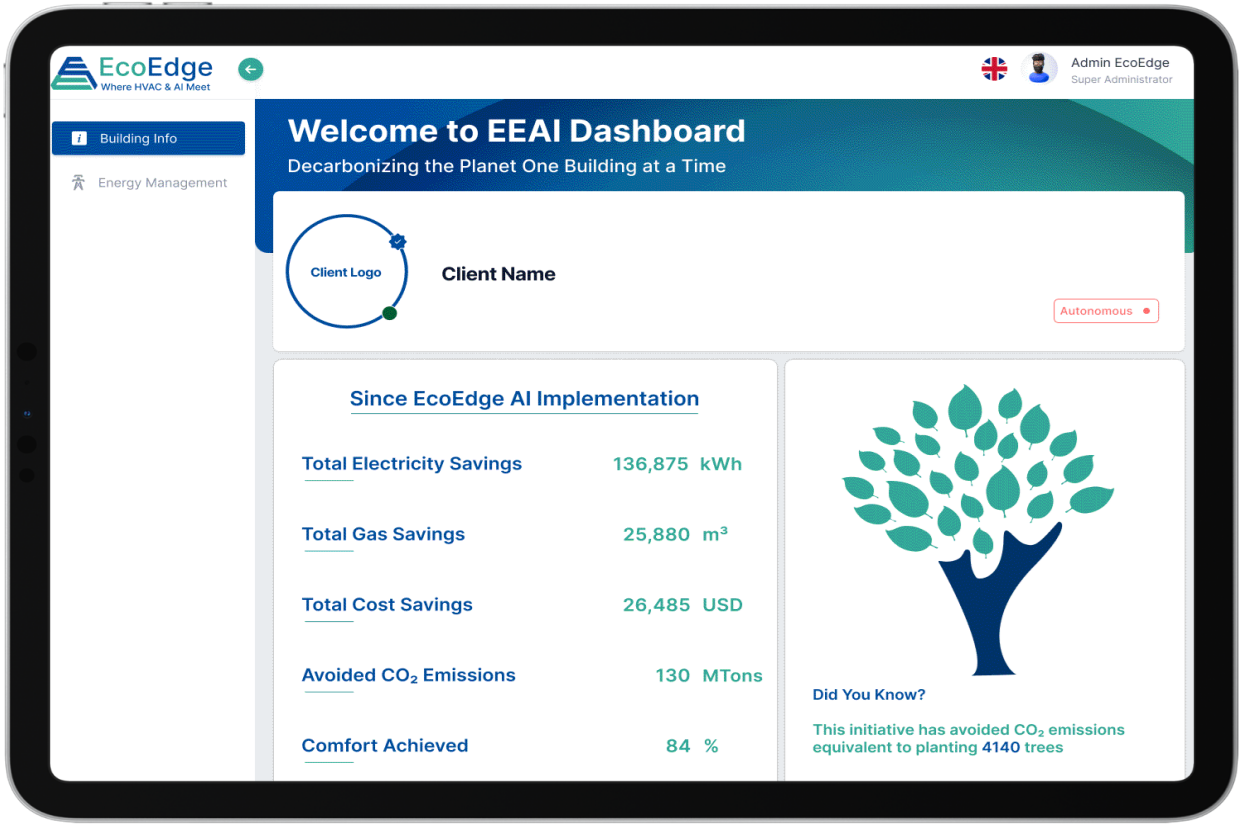
Projected Savings Potential for Year-02



DATA VISUALIZATION

User-Friendly Dashboard

- Increase in energy efficiency reporting
- Real time monitoring and data-driven control
- Fault detection and diagnosis



DELIVERY

Our tech can be integrated with HVACs within 7 days

Assessment

Our team analyzes the HVAC site then lists specs and details

Implementation

EcoEdge AI integrates with the HVAC system in just 3-5 days

Findings

Findings and possible energy consumption and reduction of carbon shared with building manager

Proposal

Cost proposal is shared with the building owner

SERVICE

Flexible Payment Models

Pay Once

One time deployment cost + annual maintenance

(Break even in 16-18 months)

(Includes tech updates, troubleshooting, monthly visits)

Pay Monthly

One time deployment cost + monthly subscription

(Break even in just 4-6 months)

(Includes tech updates, troubleshooting, monthly visits)

SPEAKING EVENTS

EcoEdge AI on the Global Stage

AI-Driven HVAC Optimization for Sustainable Urban Cities

LEAP | Smart Cities

Investing in the Future, the Energy Market, Vision, Opportunity, and Technology

LEAP | Future Energy

AI-Powered HVAC Efficiency – Startup City Exhibition Hall

BIG 5 Global

AI for Sustainability: Application in the Built Environment

Dubai AI & Web3 Festival

Clean Tech Forum

New Energy Nexus

AI & HVAC Energy Efficiency

AI 101 Strategic Workshop

SDG-FOCUSED

Our Contribution to the Planet


PAVE THE WAY FOR A GREENER FUTURE
5 Years, 5000 Buildings
3.2 Million tons of CO_2 emissions avoided

Be Part of the Change

Start Decarbonizing with Us

windmason

BREATHE THE FINEST

www.windmason.com

CONTACT US

Landline:
+966 11 515 7284

Whatsapp:
+966 54 328 8265

Email:
Info@windmason.com

Web:
www.windmason.com