

Smarter Spaces: Energy-efficient Solutions for Sustainable Urban Development

As the [urban population in the Philippines](#) continues to grow, integrating sustainability into the urban development required to accommodate this growth becomes essential. Buildings are one of the [biggest contributors to greenhouse gas emissions](#), so efforts toward making them run more efficiently offers one of the largest Rols. International Elevator & Equipment, Inc. (IEE), in collaboration with Mitsubishi Electric, creates solutions that improve the energy efficiency of various building systems.

Eco-conscious Vertical Mobility

Elevators and escalators are necessary to the accessibility of buildings. But, they consume significant amounts of energy. Understanding this, IEE created their "[Quality in Motion](#)" policy which minimizes the environmental impact of these essential systems during every stage of their lifecycle.

One way IEE fulfills this promise is with their unique use of regenerative converters. This technology enables their elevators to generate power during light car loads which [reduces their overall energy use by up to 35%](#) compared to elevators without regenerative converters. That's just one example of the ways IEE innovates to reduce the environmental impact of their elevators and escalators.

Advanced Air Conditioning Solutions

HVAC takes a lot of energy anywhere in the world, but particularly in the Philippines when [summertime regularly reaches temperatures](#) of over 32°C. Even in the winter, temperatures rarely dip below 25°C making air conditioning a year-round necessity.

IEE, in collaboration with Mitsubishi Electric, tackle this challenge head on. We employ the [environmentally-friendly R-32 refrigerants](#) in all of our HVAC systems which cuts the global warming potential by $\frac{2}{3}$ of traditional refrigerants. Our HVAC systems also feature a [plasma filtration system](#) that removes indoor air pollutants by up to 99%.

Intelligent Integration: Building Automation Systems (BAS)

While we can always aim to improve the energy efficiency of individual building systems, [Building Automation Systems](#) (BAS) take a more holistic approach. They aim to improve the interaction between building systems and the building's occupants for overarching efficiency

improvements. These software solutions integrate all building systems and tie them to informational sensors enabling more fine-tuned control of systems based on current needs.

For example, an operator can adjust the air conditioning of unoccupied rooms to reduce the energy use of the air conditioning system. Similarly, an escalator that's running when nobody's using it is wasting energy. BAS allows you to adjust the operation of your escalator so it's only running when it's needed.

These improvements are why IEE created its own BAS to work with its various building system products as well as third-party systems.

A Commitment Beyond Products

IEE actively incorporates sustainability practices in all of its operations. We've fully aligned with [Mitsubishi Electric's Sustainability Vision 2050](#) with an aim to achieve net-zero CO2 emissions by 2050. Further, we plan to make 100% effective use of all wastes by 2050 to reuse as much as possible.