The Glorieta Insurgentes Tower is nominated for Green Solutions Awards because the conception of the project includes comfort, functionality, sustainability and energy efficiency with LEED Platinum Certification, transit oriented development with TOD Standard Silver Certification, seismic resilience, construction quality and ease of maintenance.

The Tower stands as a landmark in Mexico City with an elegant and timeless design, which articulates Chapultepec Avenue with the Insurgentes Roundabout taking its semicircular shape to develop an office building of 26 levels, 120 m / 393.70 ft height. an urban acupuncture needle in one of the nervepoints of the city, it is a spearhead in the rescue of the area with direct access to the plaza through a new pedestrian path underground, encouraging the use of public transport in a city where movement is a major issue.

The office slabs offer wide comfortable spaces that are surrounded by a double layer high efficiency low-e glass curtain wall allowing 360º panoramic city views enjoying lots of natural light. The floorplan has a 91% area efficiency due a compact service core without sacrificing comfort or functionality. The tower has amenities for further comfort, an 800 people double height multi-purpose hall with retractile bleachers in the 8th floor as well as vegetated roof-gardens representing 20% of the plot area on top of the parking structure.

The Tower is a Smart Building with 57.9% in energy savings and up to 100% water savings, during rainy season, due to a combination of design strategies & technologies which include: totally automated lighting & shading system with occupancy sensing, daylight harvesting, dimming & scheduling through the entire building that calculates the optimal settings taking into account indoor, outdoor & orientation conditions; efficient façade design with thermal gain blockage; individualized by floor air conditioning with a cost effective VRF System; roof solar panels producing approximately 50% of the needs of common space; total water
treatment including harvested rainwater & wastewater; a Building Management System with a large video wall showcasing in real time all the information about the different systems in a very visual graphs & stats way, including pedestrian and vehicular access, fire detection, pumping systems, water treatment plants, cisterns, emergency plants, diesel levels, energy sub-metering, ventilation and extraction, a/c, lighting control, electrical and water consumption, maintenance programming & CCTV, making it a building with optimal operation with zero over cost. Glorieta Insurgentes Tower is one of the few Mexico’s most sustainable and energy efficient High Rise.

See more details about this project

https://www.eosis.energy/portfolio-category/highrise-buildings/
https://www.facebook.com/ConstructoraCimet/

Photo credit

LGM Studio | Luis Gallardo
Zaickz Moz

Stakeholders

Contractor

Name: CIMET ARQUITECTOS
Contact: cimet@archdifusion.mx
https://www.facebook.com/ConstructoraCimet/

Construction Manager

Name: CIMET Arquitectos
Contact: cimet@archdifusion.mx
https://www.facebook.com/ConstructoraCimet/

Stakeholders

Function: Certification company
eosis
jaime.talavera@eosis.mx
http://www.eosis.mx/
LEED Platinum Certification

Contracting method

Build and sell construction

Energy

Energy consumption

Primary need: 26.50 kWhpe/m².year
Primary need for standard building: 64.00 kWhpe/m².year
Calculation method: Other
Breakdown for energy consumption:
- Cooling: 234100
- Heating: 0
- Hot Water: 13700
- Ventilation: 273300
- Lighting: 381000
- Pumps: 3300
Primary need: 1 592 200.00 per year
Final energy need: 1 750 000 per year

Envelope performance

More information:
U-value for Windows: 0.28
Building Compactness Coefficient : 60 000,00

More information
Consumption is monitored through BMS, making corrective actions when necessary, keeping it online with energetic models.

Real final energy consumption
Final Energy : 29,10 kWh/m² year

Renewables & systems

Systems
Cooling system :
- VAV Syst. (Variable Air Volume system)
Renewable systems :
- Solar photovoltaic
Renewable energy production : 25,00 %

Products

Product
Glass | FAÇADE
Guardian
https://www.guardianglass.com/mx/es/contact

Lighting
Zumtobel

Air-conditioning
Mitsubishi Heavy
https://www.mhi.com

Costs

Construction and exploitation costs
Total cost of the building : 89 368 400 €

Health and comfort

Water management
Consumption from water network : 893,77 m³
Consumption of grey water: 4,468.86 m³
Consumption of harvested rainwater: 1,533.20 m³
Water Self Sufficiency Index: 0.87
Water Consumption/m²: 0.01

Carbon

GHG emissions
GHG in use: 43.71 KgCO₂/m²/year
Methodology used:
Green Power and Carbon Offset

Contest

Reasons for participating in the competition(s)
• 57.9% in energy savings
• 100% water savings, during rainy season
• High efficiency low-e glass curtain
• Vegetated roof-gardens

Building candidate in the category

Low Carbon

Users' Choice