Glorieta Insurgentes Tower

by Yoram Cimet / 2019-06-18 02:03:19 / International / 7526 / EN

Primary energy need :

26.5 **kWhpe/m^2.year**

(Calculation method : Other)

Building Type : High office tower > 28m
Construction Year : 2018
Delivery year : 2018
Address 1 - street : Glorieta de los Insurgentes 06700 MEXICO CITY , Mexico
Net Floor Area : 60 000 m^2

Construction/refurbishment cost : 89 368 400 €
Cost/m2 : 1489.47 €/m^2

General information

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 andease 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 thatare surrounded by a double layer high efficiency low-e glass curtain wallallowing 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 8thfloor as well as vegetated roof-gardens representing 20% of the plot area ontop of the parking structure.

The Tower is a Smart Building with 57.9% in energysavings and up to 100% water savings, during rainy season, due to a combination of design strategies & technologies which include: totally automatedlighting & shading system with occupancy sensing, daylight harvesting,dimming & scheduling through the entire building that calculates theoptimal settings taking into account indoor, outdoor & orientationconditions; efficient façade design with thermal gain blockage; individualizedby floor air conditioning with a cost effective VRF System; roof solar panelsproducing approximately 50% of the needs of common space; total water

treatmentincluding 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 visualgraphs & 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, lightingcontrol, 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 energyefficient 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 energy need : 26,50 kWhpe/m^2.year

Primary energy need for standard building : 64,00 kWhpe/m^2.year

Calculation method : Other

Breakdown for energy consumption : Cooling 234100
Heating 0
Hot Water 13700
Ventilation 273300
Lighting 381000
Pumps 3300
Primary energy 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 monitor through BMS making corrective actions when necessary, keeping it online with energetic model .

Real final energy consumption

Final Energy : 29,10 kWhfe/m^2.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

Product category : Table 'c21_germany.innov_category' doesn't exist SELECT one.innov_category AS current,two.innov_category AS parentFROM innov_category AS oneINNER JOIN innov_category AS two ON one.parent_id = two.idWHERE one.state=1AND one.id = '10'

Lighting

Zumtobel

https://www.zumtobel.com/com-en/index.html

Product category : Table 'c21_germany.innov_category' doesn't exist SELECT one.innov_category AS current,two.innov_category AS parentFROM innov_category AS oneINNER JOIN innov_category AS two ON one.parent_id = two.idWHERE one.state=1AND one.id = '17'

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 m^3

Consumption of grey water : 4 468,86 m^3

Consumption of harvested rainwater : 1 533,20 m^3

Water Self Sufficiency Index : 0.87

Water Consumption/m2 : 0.01

Carbon

GHG emissions

GHG in use : 43,71 $KgCO_2/m^2$/year

Methodology used :

Green Power and Carbon Offset

Contest

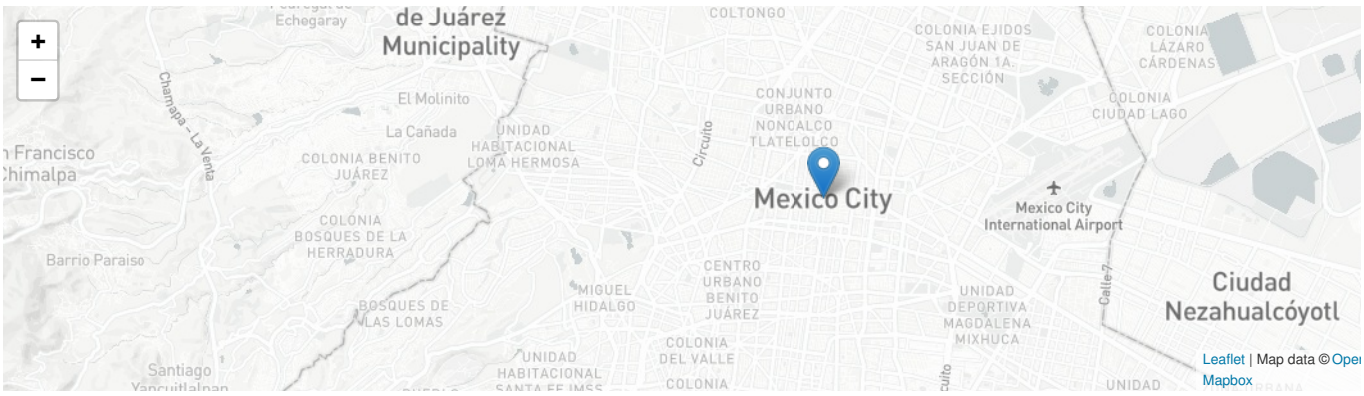
Reasons for participating in the competition(s)

- 57.9% in energysavings
- 100% water savings, during rainy season
- high efficiency low-e glass curtain
- vegetated roof-gardens

Building candidate in the category

Low Carbon

Users' Choice



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