

## Glorieta Insurgentes Tower

by Yoram Cimet / 2019-06-18 02:03:19 / International / 7336 / EN



Renovation

Primary energy need :

**26.5** kWhpe/m<sup>2</sup>.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<sup>2</sup>

**Construction/refurbishment cost** : 89 368 400 €

**Cost/m2** : 1489.47 €/m<sup>2</sup>

### 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 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 nerve points 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 360° panoramic city views enjoying lots of natural light. The floorplan has a 91% area efficiency due to 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 facade 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 energy need : 26,50 kWhpe/m<sup>2</sup>.year

Primary energy need for standard building : 64,00 kWhpe/m<sup>2</sup>.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 kWh/m<sup>2</sup>.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 : Finishing work / Exterior joinery - Doors and Windows

Lighting

Zumtobel

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

Product category : HVAC, électricité / lighting

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<sup>3</sup>

Consumption of grey water : 4 468,86 m<sup>3</sup>

Consumption of harvested rainwater : 1 533,20 m<sup>3</sup>

Water Self Sufficiency Index : 0.87

Water Consumption/m<sup>2</sup> : 0.01

## Carbon

### GHG emissions

GHG in use : 43,71 KgCO<sub>2</sub>/m<sup>2</sup>/year

Methodology used :

Green Power and Carbon Offset

## Contest

### Building candidate in the category



Low Carbon



Users' Choice

