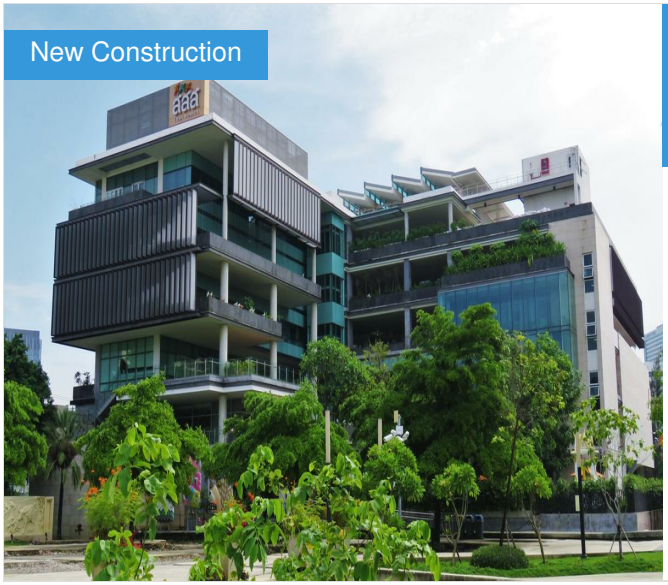
Thai Health Promotion Center

by PIMPUN JIROJWONG / 2016-06-08 10:22:45 / Internazionale / 12068 / EN



Primary energy need :

159.34 kWhpe/m².year

(Calculation method : Primary energy needs)

ENERGY CONSUMPTION

Economical building *Building*

< 50	A
51 à 90	B
91 à 150	C
151 à 230	D
231 à 330	E
331 à 450	F
> 450	G

Energy-intensive building

Building Type : Office building < 28m
Construction Year : 2010
Delivery year : 2012
Address 1 - street : 10120 BANGKOK, Thailand
Climate zone : [Aw] Tropical Wet & Dry with dry winter.

Net Floor Area : 24 735 m² Other
Construction/refurbishment cost : 19 000 000 €
Number of Work station : 250 Work station
Cost/m2 : 768.14 €/m²

Certifications :

General information

This building has been built for the Thai Health Promotion Organization.It is located in Sathorn district in Bangkok.
Thai Health Promotion Organization is a non-profit organization dedicated to promote health and well-being of Thai people. Thus the project aims to create an environmentally-friendly building in order to represent community-oriented philosophy of the organization through climate-responsive design features and user-friendly spaces.

The total floor area of this building is 26,000 square meter.

See more details about this project

http://www.thaihealthcenter.org/campaign/index.php/home/pub/home

Stakeholders

Stakeholders

Function : Investor

Thai Health Promotion Foundation

InterRelations@thaihealth.or.th

http://en.thaihealth.or.th/

To inspire, motivate, coordinate, and empower individuals and organizations in all sectors for the enhancement of health promotive capability as well as healthy society and environment to support health promotion movement in Thailand

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Function : Environmental consultancy

Africvs Co.,Ltd.

info@africvs.com

http://www.africvs.com/

Green building consulting

Function : Designer

Plan Studio Co.,Ltd.

plan_studio@yahoo.com

Architectural design

Function : Designer

P49 Deesign and Associates Co.,Ltd.

p49deesign@p49deesign.com

http://www.p49deesign.com/

Interior design

Function : Other consultancy agency

Plan Motif Co.,Ltd.

64 Soi Sathorn 10, North Sathorn Road, Sathorn, Bangrak, 10500 Bangkok Thailand

Exhibition designer

Contracting method

Separate batches

Type of market

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If you had to do it again?

Glass roof under a pond to have natural light in the basement. This was a good idea but due to inexperience in this domain, there is water leakage, and it damages the wall and the paint.

Building users opinion

Users are very pleased by this building.
It's very oriented about communication and human interaction.

Energy

Energy consumption

Primary energy need : 159,34 kWhpe/m^2.year

Primary energy need for standard building : 532,22 kWhpe/m^2.year

Calculation method : Primary energy needs

Breakdown for energy consumption : Lighting 8%
Equipment 26%
HVAC 59%
Misc 7%

Envelope performance

Envelope U-Value : 1,08 $W.m^{-2}.K^{-1}$

Real final energy consumption

Final Energy : 145,10 kWhfe/m^2.year

Real final energy consumption/m2 : 64,61 kWhfe/m^2.year

Real final energy consumption/functional unit : 66,40 kWhfe/m^2.year

Year of the real energy consumption : 2 015

Renewables & systems

Systems

Heating system :
- No heating system

Hot water system :
- No domestic hot water system

Cooling system :
- VAV Syst. (Variable Air Volume system)

Ventilation system :
- Single flow

Renewable systems :
- Solar photovoltaic

Renewable energy production : 6,10 %

Other information on HVAC :
HVAC system with 3 sets of 200 tons chiller supplied to VAV system with direct outdoor air system.

Solutions enhancing nature free gains :
Rainwater harvesting to us it at flush toilet and to water plants. Solar shading protection to avoid heat gain on the windows and the walls.

Environment

Urban environment

Situated in the government office zoning, quiet neighborhood of Bangkok, the building is surrounded by parks from the South East and the North. Shuttle bus to the MRT Station of Lumphini is provided.

Products

Product

System Monitoring

Honeywell

Muang Thai-Phatra Office Tower II Ratchadaphisek Rd Khwang Huai Khwang Khet Huai Khwang Province Bangkok 10310

http://www.honeywell.com

Product category : Table 'c21_italy.innov_category' doesn't exist SELECT one.innov_category AS current,two.innov_ca
AS oneINNER JOIN innov_category AS two ON one.parent_id = two.idWHERE one.state=1AND one.id = '29'

System monitoring as a method to communicate realtime energy usage result to occupants.

Users and visitors are convinced and come closer to building consumption. People care more about energy use and interested in energy saving.

Costs

Construction and exploitation costs

Total cost of the building : 21 000 000 €

Health and comfort

Water management

Consumption from water network : 20 315,00 m^3

Water Consumption/m2 : 0.82

Water Consumption/Work station : 81.26

Indoor Air quality

Airflow sensors are installed at the outdoor air inlets to confirm that outdoor air intake will function as designed. Additionally, CO2 sensors are equipped in densely occupied space such as meeting room and be able to alarm when carbondioxide concentration exceeds limit. All materials, coating, adhesive and sealants for indoor use are complied with VOC limit by SCQMD rule#1168. Building flush-out is performed before occupancy to ensure that air will not be polluted by construction activities.

Comfort

Health & comfort : Light shelf along with tilted ceiling is designed to gain more benefit from daylight as the daylight can go deeper in to the room depth. Furthermore, the light shelf also acts as shading for windows. Private office is partitioned by glass to allow the open-plan inside access to view.

Carbon

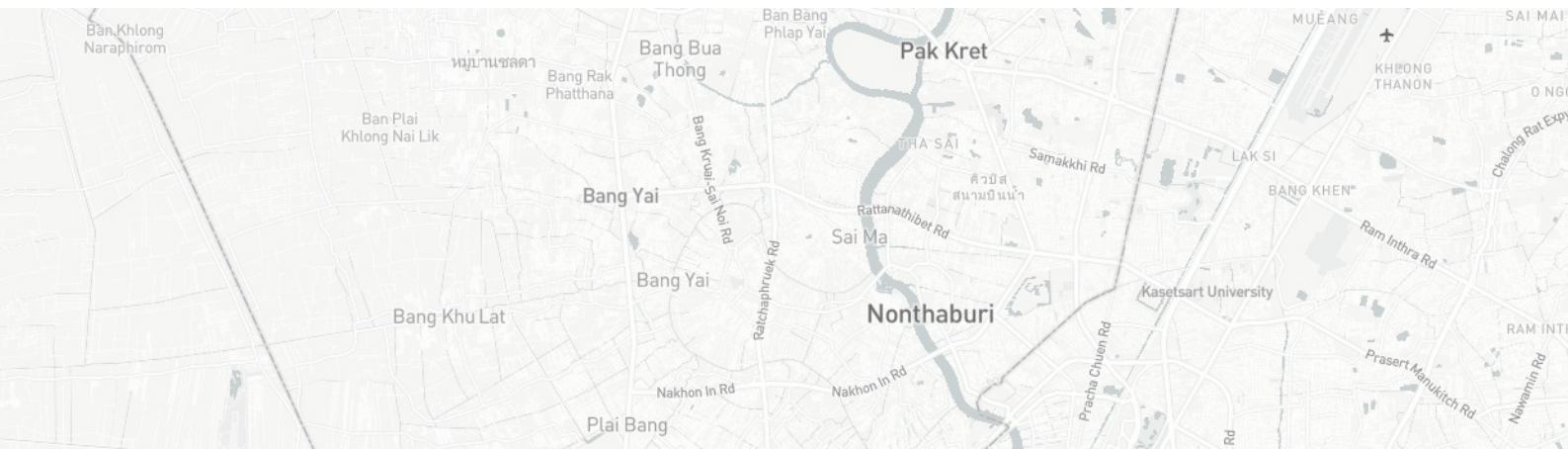
GHG emissions

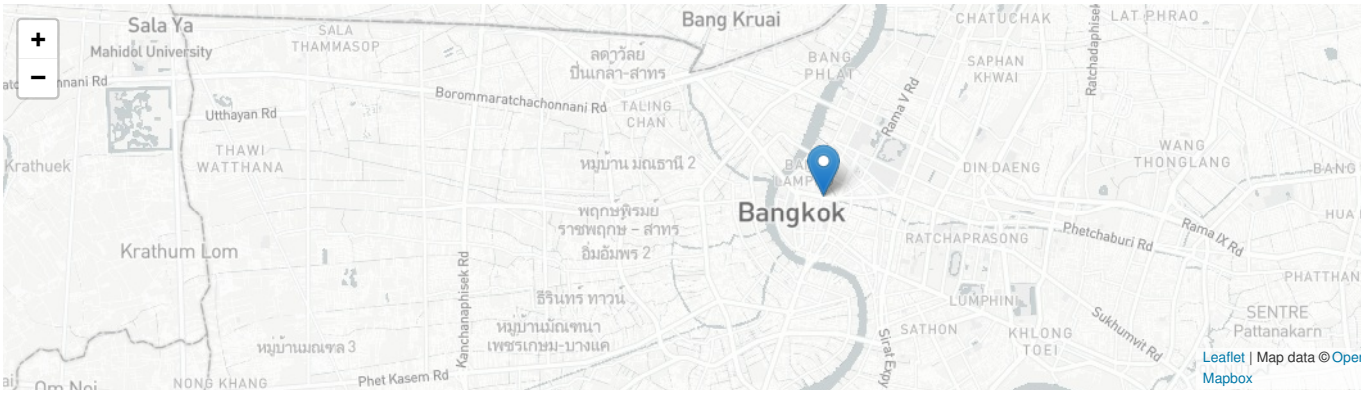
GHG in use : 54,00 $KgCO_2/m^2$/year

Contest

Reasons for participating in the competition(s)

The building design is inherited from traditional Thai house which is native to hot climates. Intellectual knowledge from the past along with building technology is adapted to the design to create the best performance and fit for local climate.





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