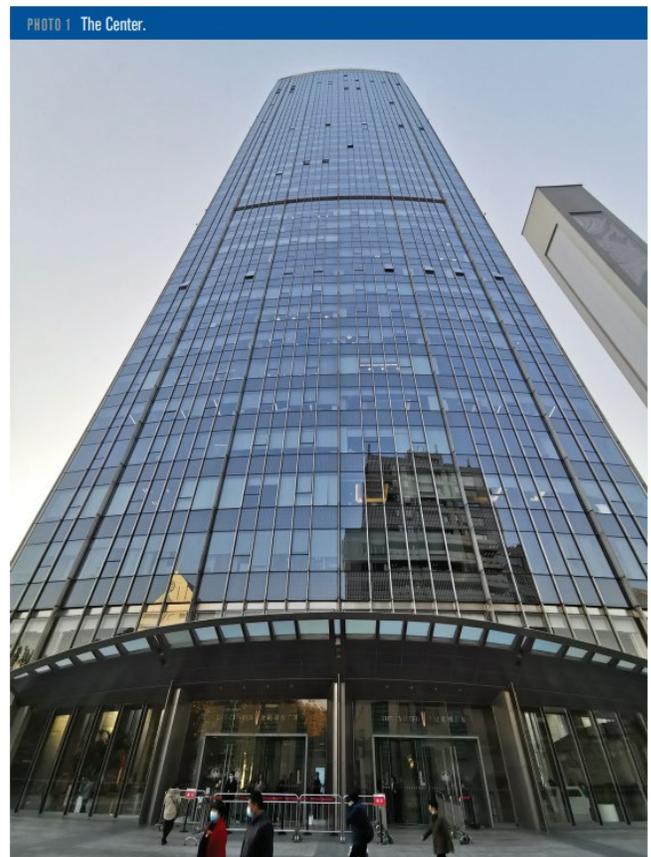


Be an Energy Genius ↩

## The Center Case Study

### \* The Strategy

The Center is a Class A commercial office building in city center Shanghai, China. After a Building EQ In Operation assessment in 2013, the building underwent renovations to enhance the mechanical and electrical systems. A follow-up In Operation assessment and ASHRAE Standard 211 Level 1 Energy Audit was conducted in 2021. With the energy savings realized by the renovations and demonstrated by the two assessments, The Center was awarded the inaugural ASHRAE Energy Genius Award in 2022. The award recognizes excellence in the assessment of building energy performance.



### \* The Outcomes

The Energy Efficiency Measures (EEMs) implemented by the building's owners reduced energy use intensity (EUI) by 19% and total annual electric consumption by 21.4% between 2013 and 2021. The implemented EEMs are shown in the table below. The quality of the building's indoor environment was not compromised by the energy improvements -- an IEQ survey revealed that 84% of the occupants gave the building its highest satisfaction ratings. Special arrangements for health and safety were implemented during the 2021 audit in order to conduct the on-site assessment due to the COVID-19 pandemic, including proof of "green" health code, body temperature checks, face masks, along with social distancing and occupancy limitations.

### Implemented Energy Efficiency Measures (EEMs)

Replaced T-5 fluorescent light fixtures with LEDs in the parking garage floor and staircase area, plant room, elevator lobby, and office communal area

Installed two sets of gas-fired boilers with heating capacity of 2500 kW and added plate heat exchangers.

Installed three centrifugal chillers with total cooling capacity of 3,516 kW, two screw chillers with total cooling capacity of 1,044 kW, and chilled water pumps.

Added Low-e curtain glazing to exterior windows.

Connected all heating, cooling, and lighting systems and sensors to the building automation system (BAS).

#### \* For More Information:

- *The 2022 Energy Genius Award Winner*, ASHRAE Journal Article, January 2023 Issue (Volume 65, No. 1)
- *The Executive Center*, <https://www.executivecentre.com/office-space/shanghai-the-center/>

Check out the Building EQ Portal at [ashrae.org/BuildingEQ](https://www.ashrae.org/BuildingEQ).

