



Federation of Korean Industries

Seoul, Korea

ADRIAN SMITH + GORDON GILL
ARCHITECTURE

Federation of Korean Industries Seoul, Korea

Completed in December 2013, the new head office building for the Federation of Korean Industries (FKI) is a major new addition to the skyline of Seoul, Korea. FKI represents major Korean companies such as Samsung, LG and Hyundai Motors. The new headquarters is located on Yeoi-Dae-Roh, the main through-road in Seoul and is now a prominent fixture among the wall of marquee buildings along the road, directly across the street from Yeoido Park.

SERVICES

Architecture
Interior Design

CLIENT

Federation of Korean
Industries

FUNCTION

Office

FACTS

244 m height
170,104 sm area

The 50-story, 240-meter tower features an innovative exterior wall, designed specifically for the project. The building's unique skin helps reduce internal heating and cooling loads and collects energy through photovoltaic panels that are integrated into the spandrel areas of the southwest and northwest facades.

The concept for FKI was developed by combining the client's request for a building that was contextual to the predominantly orthogonal architecture of the Yeoido District and the city's requirement that all new large-scale commercial buildings generate a minimum of 5% of their energy onsite. The design team developed a strategy that would meet both requirements as well as reduce the amount of energy that the building used for its heating and cooling loads. The use of building integrated photovoltaic panels (BIPV) was seen as an architecturally appealing way to meet the strict zoning requirement, while the optimization of the panels became a driving factor in developing the architectural expression.

FKI's exterior wall system combines maximum access to views, energy efficiency strategies and energy generation technologies. By angling the spandrel panels 30 degrees toward the sun, the amount of energy collected by the photovoltaic panels is maximized. Below the spandrel panels, the vision panels are angled 15 degrees toward the ground, minimizing the amount of direct sun radiation and glare. The end result is a unique folded exterior texture that is both purposeful and visually distinctive. Benefits include a reduction of glare and heat gains from direct sunlight, while maintaining a high level of indirect light. With the exception of the early morning and the late afternoon periods, the building is able to use the geometry of the exterior wall to self-shade the perimeter spaces that would normally be inundated with direct sunlight. This gives the building occupants the flexibility to open the shades and allow indirect natural light.

The tower's interior includes several indoor garden and atrium spaces that enhance the workplace environment with natural elements of wood, bamboo and other native plants. The interior of the building takes advantage of the floor-to-ceiling windows of the exterior wall, offering an abundance of natural light to office spaces and corridors as well as extensive views of neighboring Yeoido Park, the Han River and the surrounding city.

FKI features an expansive rooftop atrium garden that also has custom photovoltaic panels. The ideal angle of the panel placement on the roof was studied in detail. When analyzing the roof skylight photovoltaic panels, it was equally important to account for self-shading so that enough natural light would be let into the sky garden below. The garden is planted with Korean Boxwood, a lush and hearty shrub that is also low-maintenance. The rooftop atrium also has several seating and viewing areas that tenants can sit and enjoy views of the surrounding city.

The sculptural podium piece is located on central Yeoi-Dae-Ro Avenue, further promoting the tower's public identity. The podium amenities, available for public use, include a banquet hall, a central restaurant and a conference center. The podium is available for international conferences with a large first floor banquet hall and smaller conference rooms of various sizes located on the second and third floors.

FKI clearly illustrates advancement in building facades from simple wall systems to high-performance, integrated architectural and engineering design solutions. The design team worked to create an intelligent, high-performing, forward-looking building that exhibited timeless and enduring qualities. FKI's grand opening was celebrated in Seoul on December 16, 2013.





EXTERIOR WALL DETAILS









