

Case Study



Sustainable



Office Bldg



Recreation/Civic

PROJECT CREDITS

Owner

San Francisco Public Utilities Commission

Architect/Designers

KMD Architects
San Francisco, CA

Stevens + Associates
San Francisco, CA

Vitro Products

Solarban® 70XL glass
Starphire® glass

Glazing Fabricator

Hartung Glass Industries
Takwila, WA

Exterior Glazing Contractor

Benson Industries
Portland, OR

Interior Glazing Contractor

Progress Glass
San Francisco, CA



The San Francisco Public Utilities Commission Headquarters features *Solarban*® 70XL glass over *Starphire*® glass by Vitro Architectural Glass (formerly PPG glass). As a result of natural daylight harvesting made possible by the high-performing glass, the building uses less energy for interior illuminations than a typical office building.

San Francisco Public Utilities Commission Headquarters

SAN FRANCISCO, CA

PROJECT BACKGROUND

The award-winning, Leadership in Energy and Environmental Design (LEED®) Platinum certified, earthquake-resistant San Francisco Public Utilities Commission Headquarters — also known as 525 Golden Gate — has been recognized as one of the greenest urban office buildings in North America. Designed by KMD Architects and Stevens + Associates, the 277,000 square-foot, 13-story building features a high-performing glazing system incorporating *Solarban*® 70XL glass over *Starphire* Ultra-Clear™ Glass by Vitro Architectural Glass (formerly PPG glass), and a concrete building envelope that provides natural ventilation, climate control and daylighting.

The building's open office design, combined with automated shading devices and a striking transparent stairwell, minimizes heat gain while light shelves facilitate daylight harvesting.

Insulating glass units (IGUs), fabricated by Hartung Glass Industries with *Solarban*® 70XL glass on *Starphire*® glass, allow light to indirectly penetrate work spaces. As a result, the headquarters uses 55 percent less energy for interior illumination than a typical Class A office building.

“The glass from Hartung Glass and [Vitra] is a critical component of the overall thermal and structural performance,” said John Beaulieu, vice president of business development for Benson Industries, the glazing contractor. “It’s a real partnership between the architect, the mechanical engineer and the fenestration team to collaborate for the right mix of glass, framing and insulation for the final specification.”



San Francisco Public Utilities Commission Headquarters

In a standard, 1-inch IGU, *Solarban*® 70XL glass has visible light transmittance (VLT) of 64 percent and a solar heat gain coefficient (SHGC) of 0.27. With a light-to-solar gain (LSG) ratio of 2.37, *Solarban*® 70XL glass has been shown to reduce annual energy use by up to 5 percent in a typical eight-story, glass-walled office building compared to a leading solar control, low-glass, and to reduce initial capital costs for HVAC equipment by more than 20 percent.

Due to other sustainability features, such as complete on-site treatment of waste water, intelligent building systems, operable windows, extensive use of recycled materials and a passive exhaust system for ventilation, 525 Golden Gate produces 50 percent less of a carbon footprint, uses 60 percent less water and consumes 32 percent less electricity than similarly sized commercial structures. The facility is expected to exceed California's Title 24 energy code requirements by 55 percent.

San Francisco Public Utilities Commission Headquarters has won numerous awards and recognitions for its design, construction and sustainability, including:

- 2013 Top 10 Green Projects — *American Institute of Architects (AIA) Committee on the Environment (COTE)*
- 2013 Sustainable Design Award of Merit — *Structural Engineers Association (SEA) California*
- 2013 Outstanding Project Award: New Buildings Over \$100M — *National Council of SEA*
- 2013 Award of Excellence, Buildings — *Post-Tension Institute*



The 13-story building, which is LEED certified at the Platinum level, has an open office design and raised floors that enhance ventilation, while IGUs incorporating *Solarban*® 70XL glass over *Starphire*® glass allow natural light to indirectly penetrate work spaces.

- 2012 Award of Merit, Green Project (California) — *Engineering News Record (ENR)*
- 2012 Construction and Green/Environmental Award — *American Concrete International Construction*
- 2010 Integrated Project Delivery — *AIA San Francisco*
- 2010 Unbuilt Design — *AIA San Francisco*

For more information about *Solarban*® 70XL, *Starphire*® glass and other *Cradle to Cradle Certified*™ architectural glasses by Vitro Glass, visit vitroglazings.com, or call 1-855-VTRO-GLS (887-6457).