

# Renovating Building for Beauty and Performance

It's said that beauty is more than skin deep. While that truism typically refers to people, the same can be said for renovated buildings. In fact, investing in the right glass, coatings and paint for your next renovation project can do more than make it look good. It can also set the stage for a new lifetime of performance and energy savings.

Most buildings in need of renovation today were built 20 to 40 years ago, when curtain walls made of metal and glass epitomized the modernist movement. Now those façades are wearing out, giving a new generation of architects, owners and renovators the opportunity to renew and refurbish faltering glass and steel envelopes with the very latest technologies.

Working with *PPG IdeaScapes*, you can find the very best of these products, along with industry-leading technical support, all in one place and all with one call or a few clicks of the mouse.

## PPG IdeaScapes™

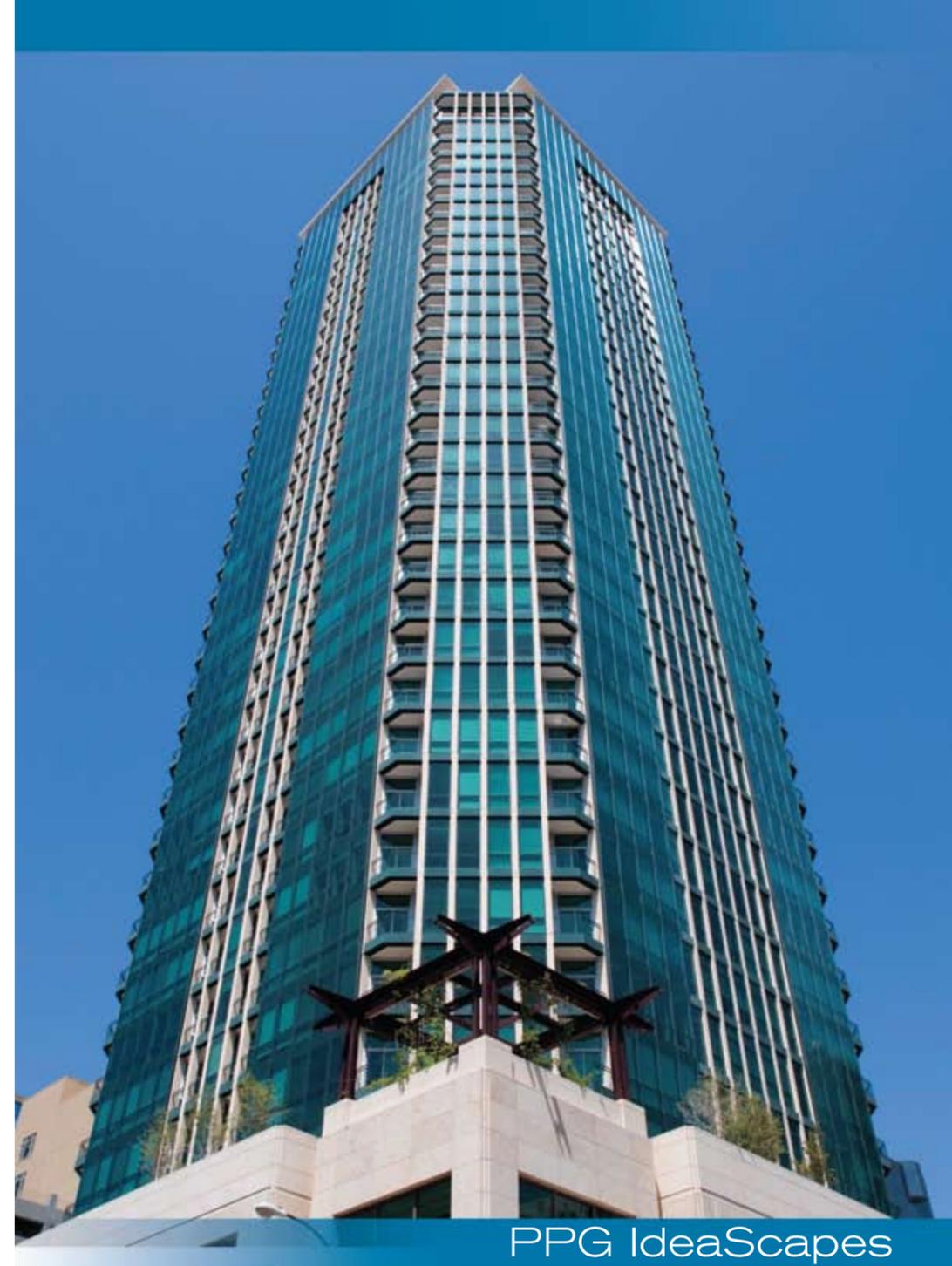
### *Certified Suppliers You Can Trust*

**PPG IdeaScapes** provides access to knowledgeable people and time-saving online tools. With one call or a few clicks of the mouse, owners and architects can compare glass, coating and paint colors, or download technical data for use with BIM software.

PPG also partners with a nationwide network of certified suppliers specially trained and audited to deliver the highest possible levels of product quality and service, whether that means fast-track delivery of products to meet tight construction deadlines or specific fabrication and installation expertise for a complex glazing or repainting project.

Whether renovating a local school or reviving a national landmark, owners and architects can rely on **PPG IdeaScapes** and PPG certified suppliers to make buildings more energy-efficient and to extend their marketability and service lives.

To learn more, visit [www.ppgideascales.com](http://www.ppgideascales.com) or call 1-888-PPG-IDEA (774-4332).



PPG IdeaScapes

Glass, Coatings and Paint for Commercial  
Building Renovation

*Sustainable, Cost-Saving Solutions for Your Building Envelope*

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## Architectural Coatings

### *An Investment that Pays for Itself*

When it comes to recoating faded metal building panels, the primary focus often is on price. The durability and performance of a coating often are regarded as secondary concerns. Ironically, in the long run, the application of lower-priced products can actually add to a building's long-term costs.

PPG has a proven solution: **Coraflon** ADS coatings. Made with a proprietary, two-component fluoropolymer formulation, these field-applied coatings retain their color and gloss two to three times longer than conventional coating systems.

The cost implications of this durability were highlighted in the recent renovation of a 20-story skyscraper in the midwestern U.S. A building owner and consultant conducted a study which showed they would actually save \$40,000 to \$450,000 by using a **Coraflon** ADS coating instead of an acrylic direct to metal (DTM) coating, despite the fact that material costs for the **Coraflon** ADS coating were about six times higher.

The reason? Their analysis showed that material costs were a fraction of those associated with labor and equipment. By eliminating the need to recoat the building two to three times over a 20-to-25 year period, the owner and consultant determined they would recoup the cost of materials — potentially many times over — by using a product that only had to be applied once over the same time period.

Like the proven, popular **Duranar** coatings on which they are based, **Coraflon** ADS coatings are available in an extraordinary range of colors, glosses and metallic effects. That means investing in **Coraflon** ADS coatings can do more than lower your building's per-square-foot coating installation costs. It also can repay you with the increased marketing advantages of a building that maintains its good looks for decades instead of years.



### *Repair or Replace? The Obvious Choice is Coraflon ADS Coatings.*

Recently, the owner of a 14-story building constructed in 1980 was faced with the option of repairing or replacing its façade. When the structure was first erected, its exterior featured 70,000 square feet of Class #1 anodized aluminum and 60,000 square feet of glass.

Although the original thickness of the factory anode coating was 1.2 mils, a misguided maintenance routine that included regular and damaging scrubbing of the coating had diminished its thickness to an average of 0.70 mils, prompting significant pitting and corrosion.

To repair the damage, the owner was presented with two options. The first was to completely replace the façade at a cost of approximately \$45.00 per square-foot with no guarantees about the length of its service life.

The second was to restore the façade, including removal and replacement of the sealant and refinishing of the aluminum with **Coraflon** ADS coatings. The cost? \$8.50 per square-foot with an estimated service life of 20 to 30 years.

Which would you choose?

## Architectural Glass

### *New Technologies Maximize Energy Savings*

In addition to being a leading coatings manufacturer, PPG is a trailblazer in the development of energy-saving architectural glasses. Because of their high visible light transmittance and exceptional solar control, these glasses can significantly reduce the energy needed to heat, cool and light renovated buildings.

Considering most buildings in need of renovation were built 20 to 40 years ago, when the use of single-pane monolithic glass was commonplace, the energy-saving potential of today's advanced architectural glazings can reach well into the millions of dollars.

One recent study modeled the energy performance of two standard eight-story office buildings in three warm-weather cities. One prototype was glazed with **Solarban** 70XL glass, a solar control, low-e glass by PPG. The other was constructed with green-tinted, ¼-inch monolithic glass.

Results showed the building glazed with **Solarban** 70XL glass cost almost \$100,000 less per year to cool, an annual savings of approximately 15 percent. Over the course of a 20-to-40-year renovation cycle, savings could total millions of dollars. HVAC equipment requirements for the same building also were diminished by over \$500,000, a savings of more than 25 percent.

Along with the **Solarban** family of solar control, low-e glasses, PPG offers **Starphire** ultra-clear glass, **Sungate** 400 and **Sungate** 500 passive low-e glasses, **Oceans of Color** tints and nature-inspired **Earth & Sky** performance tints. These products can be combined in a countless array of configurations to deliver the energy-saving performance building owners demand and the appearance options they desire.

## Cool Roof Coatings

### *A New Source of Energy Savings*

The impact of roof coatings on energy and environmental performance was not even a consideration when most older buildings were constructed, but they can be a critical source of energy and cost savings in renovated buildings.

PPG's line of **Duranar** ULTRA-Cool metal roof coatings are formulated with proprietary infrared pigments that reflect the sun's heat energy away from buildings, which reduces the amount of energy needed to cool them. That can mean big savings.



Pacific Gas & Electric, a California utility, found that substituting high-reflectance roof coatings in place of low-reflectance products generated energy cost savings of up to \$2.18 per square foot of roof area.

The same study also suggested that increasing the solar reflectance of non-residential roofs produced peak demand reductions of 10 to 30 percent. Savings were similar for daily air-conditioning in the summertime.

In a separate finding, the U.S. Department of Energy's Lawrence Berkeley National Laboratory reported that, in some applications, light-colored or infrared-reflective roofs could help buildings lower cooling-related energy costs by up to 40 percent.

Thanks to PPG's infrared-reflective coating technology, cool metal roofs also can look as good as they perform. **Duranar** ULTRA-Cool coatings are available in an ever-expanding palette of colors that add beauty and distinction to commercial metal roofs without sacrificing energy performance. In fact, PPG sets the industry standard by having more than 150 colors registered with the Cool Roof Ratings Council (CRR), with tones ranging from bright *Regal White* to *Dark Zinc Black*, *Hartford Green* and *Colonial Red*.

## The Right Colors for Any Surface

Like glass and coatings, color is indelible part of PPG's heritage. For generations, building professionals from local interior designers to internationally known architects have counted on PPG paints and coatings to protect and beautify their buildings inside and out.

From zero-VOC **Pure Performance** paint by PPG **Pittsburgh** Paints to low-VOC commercial paints such as **Speedhide**, **Manor Hall**, **Pitthane** and **Durethane**, PPG delivers the right primers and finishes for virtually every interior and exterior surface.

### *Get the Credits You Deserve*

Green renovation can pay in more ways than one. In addition to potentially lowering energy, maintenance and other costs, your green renovation project might also be eligible for tax credits from the federal government, your local state government or local municipality. Utility companies all over the country also offer incentives for reducing energy demand or using alternative forms of energy. To learn more, check with your tax advisor or local utility companies.

