

**Substantially cut
cooling costs.**

“We found a solution that enabled the bank to preserve all of the natural light our headquarters enjoys, without sacrificing energy efficiency.”

*— Dennis Calik,
National Bank of Arizona Senior
VP of Corporate Properties*

3M™ Sun Control Window Film Prestige Exterior Series

National Bank of Arizona — Phoenix, Arizona

► Project Scope

In a city where the daily average high temperature in mid-summer is 102°F, and monthly rainfall averages under one inch, a vast amount of unimpeded sunlight is a serious detriment to efficient, cost-effective cooling. So when National Bank of Arizona decided to take advantage of a comprehensive energy-efficiency rebate program being offered by its local electric utility, Salt River Project (SRP), finding a solution to the skylight problem became one of its high-priority objectives.



► Situation

National Bank of Arizona's 144,000-square-foot headquarters complex in Phoenix, built in 1987 for a previous owner, contains a beautiful amenity: 18,000 square feet of skylights allow natural light to flood the premises, nurturing an abundance of plant life as well as the busy employees and customers on the floor 30 feet below the glass.

According to Dennis Calik, National Bank of Arizona's senior vice president of corporate properties, the bank's energy-efficiency makeover included the installation of a new 250-ton chiller to supplement the old one, together with the addition of lighting sensors and new lighting technology. However, the full advantages of these upgrades would not be realized unless something was done to address the heat transmitted through the skylights.

► Solution

After investigating a range of products, including the possible placement of cloth panels over the skylights, the bank chose 3M™ Sun Control Window Film Prestige Exterior 40, which satisfied all of the project's objectives.

► Result

The Prestige Exterior Window Film was installed in the relatively short span of two weeks, with no interior disruption. The film is estimated to be saving the bank 249,000 kilowatt hours of electricity per year, which is enough energy to power approximately 17 average-size homes, according to SRP. Equally important, Mr. Calik noted that visibility in the lobby immediately improved. The window film is anticipated to pay for itself over a period of five years.

"The total program has been a great success, saving us about 747,000 kilowatt hours a year," said Mr. Calik. Instead of running two chillers, the bank has found that, with the addition of direct digital controls, it can operate the new chiller at about 75-to-80-percent of capacity, even on the hottest days. According to SRP, the bank is saving more than \$74,000 per year in electricity costs. And much of the project's cost was offset by rebates from SRP.

Superior performance through 3M Science.

3M™ Prestige Series Films use non-metallized, multilayer optical film and nanotechnology to achieve what other films simply can't:

- **Enhanced comfort and protection** — The spectrally selective films reject up to 97%* of the sun's heat-producing infrared light, helping keep interiors cooler, reducing the load on cooling systems and saving energy. By blocking 99.9% of UV rays, the films help protect furnishings from the harmful effects of the sun. And according to the Skin Cancer Foundation, window film is one of several recommended safeguards against UV damage.
- **Unsurpassed capabilities** — What sets Prestige Series Films apart is the precision with which light waves are controlled as they pass through or reflect off of hundreds of layers of film. Compared to other films, the Prestige Series Films increase their performance at a faster rate as the sun's angle increases. That means greater protection and comfort when you need it the most. When the sun is working its hardest, so is 3M's Prestige Series.
- **Enhanced views and aesthetics** — Films that reject heat tend to have high reflectivity. Not with Prestige Series Films. These films are optically clear and can offer reflectivity that's in some cases lower than glass. That means the same visual clarity, inside and out.
- **No corrosion. No signal interference.** Being non-metallic, Prestige Series Films aren't susceptible to corrosion in coastal environments. They also don't interfere with electronic device signals.

"Working with 3M and its authorized 3M dealer provided an important measure of assurance that both product and installation would be of the highest quality."

— Dennis Calik, National Bank of Arizona Senior VP of Corporate Properties

Case Study Summary

Challenge: Retain the benefits of natural light while reducing the amount of heat and glare generated.

Product Selection: 3M™ Sun Control Window Film Prestige Exterior 40

Benefits: Energy savings of approximately 747,000 kilowatt hours a year saving more than \$74,000 annually, with a payback period of less than five years.



*3M Prestige Series Films block energy across the entire IR range. The 97% rejection value is based on performance in the 900-1000 nanometers (nm) range.



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