

Commercial Office Building, Rockford, Illinois



ENERGY SAVINGS MEASURED AND VERIFIED



In order to clearly demonstrate the energy-saving properties of our energy-control window film, CPFilms Energy Solutions Division joined forces with Johnson Controls, a leading global Energy Service Company (ESCO), to mount a well-defined and controlled study.

The location and duration of the study were deliberately chosen to demonstrate energy savings over both the cooling and heating seasons. The study also clearly demonstrated that energy-control window films are not a 'warm-climate only' product. LLumar® E-1220 Low-E solar control and insulating film was installed on an eight-story commercial office building near Chicago (Rockford, Illinois). The building has a conditioned space of 59,000 square feet and its windows are single-pane bronze tinted glass. Heating and cooling is provided through all-electric unit ventilators.

Prior to film installation, CPFilms created a computer-driven model which simulated energy savings, using the U.S. Department of Energy analysis method (DOE-2) to serve as a benchmark.

Over the next twelve months, Johnson Controls measured energy savings using IPMVP Option C, a methodology fashioned by IPMVP Inc. (International Performance Measurement and Verification Protocol), a worldwide non-profit organization which develops products and services to aid in the measurement and verification of energy savings from energy efficiency projects. IPMVP Option C measured energy savings of 8.8% were noted, yielding a payback in less than three years. This compared favorably with the simulated DOE-2 analysis (IPMVP Option D) which had shown 8.4% energy savings and a return of the initial investment also within three years.

The analytical experiment unquestionably demonstrated that substantial energy savings can be obtained through the installation of energy-control window film with the reasonable expectation that, in many cases, the initial investment can be cost-effectively retrieved. Moreover, energy savings can be accurately predicted using DOE-2 computer simulation methods. For more detailed information concerning this case study, please send an e-mail to EnergySolutions@CPFilms.com.

