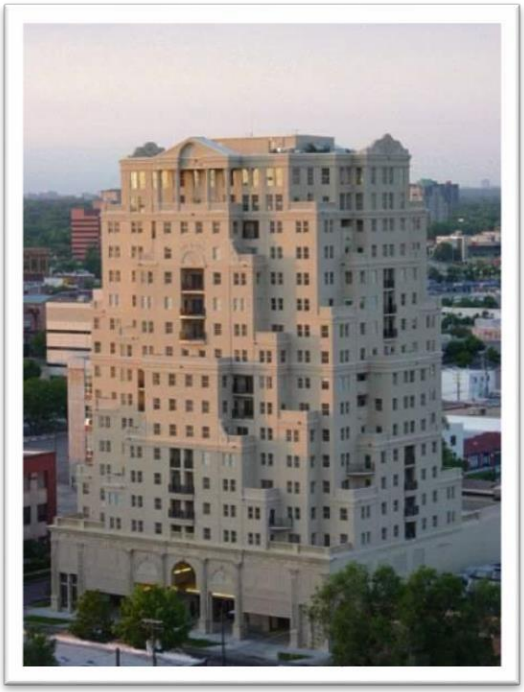
Energy Efficiency Leadership:

The Prado Condominiums

"Owners at the Prado love tracking our progress to become more energy efficient through smart efficiency upgrades. From 2014 to 2016 we cut the Prado energy bill by 38 percent, resulting in over $50,000 in savings each year."

Nickie Greco,
CAM, CMCA®, AMS®
Prado Community Association Manager



The Prado is located at 300 W 11th Avenue, in the heart of Denver's Golden Triangle.

The Prado Condominiums' energy costs were unexpectedly high when Nickie Greco took over management in 2015, so she decided to investigate energy saving measures. Her work has reduced The Prado's electricity and gas costs from $138,027 in 2014 to $85,407 in 2016, **an incredible $52,520, or 38 percent, in annual savings!** The building's ENERGY STAR score has risen from 27 in 2014 to 67 as of October 2017.

The energy saving measures implemented by The Prado Condominiums include:

- **Lighting Upgrades** – Including LED lighting, motion sensors and dimmers. The estimated annual cost savings of $16,164 will pay back the initial net cost of $31,386 in just 1.9 years. Gexpro Energy Solutions and CES provided these lighting services.
- **Recommissioning**. The building systems were tuned up and optimized by MTech Mechanical. The measures include:
    - **Cooling Tower Motor and VFD -** Adding a Variable Frequency Drive (VFD) and motor package to the cooling tower provided more stability to the system and allowed set points to be added, providing a slower start to the system to meet water temperature needs. This $10,015 initial investment is estimated to have led to $19,500 in annual electricity savings.
    - **Set Points -** A control survey was performed on all aspects of the heating, cooling and ventilation systems. The investigation provided an in-depth understanding of the mechanical system's set points, strengths and weaknesses. Adjustments were made to increase the efficiency of the equipment, reduce energy consumption and allow the equipment to operate at optimal levels.

- **Hot Water Storage Tank Insulation** – The hot water storage tank radiated enough heat to heat an entire two-story parking garage. Insulating the water tank reduced heat loss and lowered the tank's energy usage.
- **Discovering and Servicing More than 30 Stand Alone Heaters** – Small heaters were previously installed in various locations above drops ceilings and in stairwells to help prevent the pipes from freezing in inclement weather. The heaters were set to run continuously year-round regardless of the temperature. All the heaters have now been serviced to function as efficiently as possible; they are turned off during the warmer months of the year and they have a temperature gauge to turn them on only when needed during the colder months.

Energy Efficiency Measures' Costs and Savings Summary:

Project Name	Total Cost	Incentives / Xcel Rebates	Net Cost	Estimated Annual Savings	Simple Payback (Years)
Garage Lighting	$13,913	($2,478)	$11,435	$3,163	3.6
Portico Lights	$4,492	($1,445)	$3,045	$1,663	1.8
Hallway Lights	$15,929	($6,388)	$9,541	$6,845	1.4
Elevator, Commercial Hallway, & Storage Lights	$10,557	($3,192)	$7,365	$4,493	1.6
Recommissioning: Cooling Tower Motor VFD, Set Points	$14,365	($4,350)	$10,015	$19,500	0.5