

Property Management

Keys to maximizing commercial solar return on investment

Most electricity still is generated from an 1884 invention by Charles Algernon Parsons, the steam turbine. As of 2017, 72 percent of Xcel Energy's electricity in Colorado came from burning coal or gas to produce steam that drives a turbine.

On-site solar photovoltaics is an alternative that has become not only economically feasible, but also an increasingly wise investment for commercial property owners. However, while the economics are better than ever, tax and utility incentives are scheduled to reduce next year. That makes it a particularly good time to take advantage of PV, especially since green buildings can attract and retain good tenants who often are willing to pay a premium for the benefit of being in a property that aligns with the values of their employees and/or customers.

There are five key factors that will determine your solar return on investment:

■ **System design.** Commercial PV can be installed on a commercial roof, over a parking lot or mounted directly to the ground. A large, flat, structurally strong and unshaded roof typically offers the best economics for solar – the most electric-



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ity (kilowatt hours) for the lowest cost. A south-facing solar PV system tilted at 10 degrees on such a roof minimizes uplift, roof attachments and weight, and therefore reduces cost

while maintaining optimal system efficiency.

Regardless of the type of PV or property type, a system that's expertly designed will maximize your ROI.

■ **Utility costs, escalation rate and solar production.** Utility costs are a significant portion of a commercial business' annual budget, and that cost typically rises each year. The Energy Information Administration has data indicating that Colorado's commercial and industrial electric rates have gone up 70 percent from 2001 to 2016, an average of 3.6 percent annually.

Net metering allows customers with on-site PV to receive a 1:1 retail credit for any electricity that their system produces. It doesn't matter what time of day your business operates or

when you are using power, every kWh of solar electricity produced will provide the same benefit by offsetting your usage.

A 500 kilowatt PV system will make roughly 750,000 kWh per year and reduce your annual electric bill by between \$30,000 and \$50,000 per year. Additionally, because utility electricity rates tend to rise every year, the value of the offset energy rises over time.

Solar modules are designed to last 25 years or more, but the performance does degrade over time, by about 0.5 percent per year for top-tier solar modules. So, while the value of each kWh of electricity your system produces goes up each year, the total kWh produced likely will be reduced slightly each year. Modeling this correctly is key to determining the true economic value of your future solar system.

■ **Utility incentives.** In addition to offsetting your internal electricity costs, many utilities offer incentives for the solar energy that your system produces. In 2018, Xcel Energy's Solar Rewards Program offers 20-year contracts to purchase renewable energy credits for 4.25 cents per kWh produced, regardless of whether you con-

sume it on site or not. On a 500 kW system, that amounts to REC income payments of nearly \$32,000 per year.

■ **Tax incentives.** Through 2019, more than 50 percent of the total system cost can be recouped in the form of a federal investment tax credit and depreciation tax deduction benefits. These tax benefits directly reduce the cost of your system within the first year of ownership.

■ **Financing and pricing.** How you pay for your system plays a critical role in determining your ROI. While you can either lease or purchase, only a purchase (with or without financing) will allow you to take full advantage of the generous tax incentives. Commercial Property Assessed Clean Energy financing is a new form of long-term (up to 25 years), fixed interest rate, nonrecourse financing that allows you to purchase PV with no money out of pocket (100 percent loan to cost). This financing mechanism has proven to be a great option, enabling commercial property owners to go solar with extremely favorable economics.

System price depends on many factors, such as type of equipment, code requirements, number of interconnections,

type of system and location, building height, roof type and more. The average 500 kW flat-roof system might run about \$1.50 per watt (\$750,000) and take up 70,000 feet of roof. However, prices can range as high as \$5 per watt depending on the complexity of the project. An experienced solar company can help you determine the most economical solution through a detailed analysis of your property as well as your energy needs.

While price is of course an integral part of any ROI, internal rate of return or net present value analysis, it can only be understood in the context of the other factors above. A well-designed system that carries with it a higher price often delivers a better ROI than a lower-cost system designed and installed by an inexperienced solar installer. These technologically advanced, complex capital improvements require thoughtful design, detailed engineering and quality installation to deliver the most bang for the buck on this 30-year asset. Not all solar companies have the expertise required to maximize your ROI in these sophisticated ways, so it pays to choose one with a proven track record of success. ▲

Solar for Commercial Facilities

Maximize your ROI with C-PACE financing

Access to capital for solar has never been easier. C-PACE (Commercial Property Assessed Clean Energy) allows you to access non-recourse financing for up to 100% of the project cost, with fixed interest rates and terms up to 25 years. Typically, the combined net benefit of your utility savings and incentive income will exceed your annual C-PACE payments, making you cumulatively cash flow positive every year of the project.

Experienced Solar Integrators

Namasté Solar is one of the most experienced solar PV developers/integrators in the United States, having developed and installed more than 5,700 stand-alone systems in over 40 permitting jurisdictions and 7 states.



Lock in energy costs



Reduce operating expenses



Boost asset value

Learn more about how Namasté Solar can help you lock in low electricity costs, reduce operating expenses, and boost the value of your property.

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