

# NAVIGATING YOUR PATH TO ZERO NET ENERGY

## RECs vs Solar Readiness vs Solar Now

Helping your client weigh the options to achieve a zero-net-energy building and understand the return on investment with on-site renewable energy is one of the first steps in the design/build process. Which path will you take? In this scenario, based on a real-life cultural project example with 66K sq. ft. of new space and 67K sq. ft. of existing space to be renovated, the focus is on solar and assumes the building will meet sustainable design standards.

### OPTION 1



#### Purchase of Renewable Energy Certificates (RECs)



**Construction Cost**  
\$41,000,000



#### O&M Costs

- RECs purchase for 100% usage: \$2,296.25/month\*
- Utility expenses: \$19,568.99/month
- 100% RECs purchase + utility expenses = \$262,383 annually

**Total: \$6.6M over 25 years**



**Estimated Energy Use Offset**  
0%



**PV Return on Investment**  
N/A

### OPTION 2



#### Design/Build for Solar Readiness



**Construction Cost**  
\$41,030,000  
( $<0.1\%$  increase)



#### O&M Costs

- RECs purchase for 100% usage: \$2,296.25/month\*
- Utility expenses: \$19,568.99/month
- 100% RECs purchase + utility expenses = \$262,383 annually with 8% energy use offset beginning year of PV installation

**Total: \$6.2M over 25 years**  
(if PV is installed year 3)



**Estimated Energy Use Offset**  
8% (beginning year 3)



**PV Return on Investment**  
2.63% annualized ROI\*\*

### OPTION 3



#### On-site Solar Generation



**Construction Cost**  
\$41,209,000  
( $<0.6\%$  increase)



#### O&M Costs

- PV O&M: \$2,000/year
- Utility expenses: \$18,219.75/month (w/ PV)
- 92% RECs purchase with 8% energy use offset + utility expenses = \$242,637 annually

**Total: \$6.1M over 25 years**



**Estimated Energy Use Offset**  
8% (beginning year 1)



**PV Return on Investment**  
3.55% annualized ROI\*\*

## THE BIG TAKEAWAY

On-site solar is the one system you can add to a building that is a guaranteed investment, saving money in the long term.

With a minimal 0.6% increase in the overall construction cost, you can include on-site solar generation and begin showing a return on your initial investment on day one with a payback in 11 years and savings of \$500K over 25 years (estimated lifespan of the system).

\*Costs are estimated with RECs purchased through Northwestern Energy.

\*\*This estimate does not include incentives and/or rebates or energy cost escalations. These would further increase cost savings and result in a quicker ROI.

**Cushing Terrell**

Interested in all the nitty gritty details?

Download the Solar Integration Guide at: [cushingterrell.com/solar](http://cushingterrell.com/solar)