

# ON-SITE BATTERY STORAGE

## Cut Peak Demand Rates, Provide Energy Backup, and Deliver Off-Peak Power for Your Commercial, Industrial, Municipal, or Educational Facility

On-site battery storage, integrated with an on-site solar power generation system, can significantly increase the cost-saving benefits of many solar power installations for commercial, industrial, and municipal applications. On-site battery storage provides these benefits for on-site solar installations:

- **Capture and store electricity during peak daylight to reduce utility peak demand charges:** On-site battery storage captures solar-generated electricity during peak daylight periods, enabling you to use the stored energy during peak demand hours, rather than pay substantially higher peak demand rates charged by your local utility during these time periods.
- **Store electricity for use during off-peak periods:** On-site battery storage can also allow you to capture and store energy, releasing it during off-peak periods to reduce utility-generated energy costs. For example, plants can tap their battery storage to reduce or eliminate utility power costs during night-time operations, and K-12 schools can use their battery storage to offset up to 100% of their energy costs during summer months.
- **Use stored electricity as backup power in process operations to eliminate unscheduled downtime costs:** For plants running process operations, on-site battery storage provides clean, reliable backup power to eliminate production downtime and losses if utility power outages occur.
- **Use stored electricity to regulate voltage:** Battery storage stabilizes power quality, helping to minimize voltage drops for a wide range of load conditions.
- **Use stored electricity to maintain output levels:** The variable, intermittent power output from solar power generation can be stabilized and made consistent with battery storage.

### On-Site Battery Storage Ideal for Process Manufacturers, Municipal Water Systems, and Educational Facilities

On-site battery storage is an ideal solution for:

- **Process manufacturers**, subject to narrow spikes in their daily energy usage, can eliminate peak demand utility charges, offset their regular utility costs, and use their on-site battery storage for backup operations.
- **Municipal water treatment plants and other large energy users** can use on-site battery storage to reduce costs by using this stored power to flatten their utility energy use profiles, and to provide backup power for pumps and other mission-critical service requirements.
- **K-12 schools and higher educational facilities** can use on-site battery storage to offset most or all of the energy use in their buildings during seasonal low-occupancy periods.



SEE REVERSE SIDE FOR A SUMMARY OF SOLAR ENERGY FINANCING OPTIONS

# New Tax Laws Provide Additional Incentives for On-Site Solar and Integrated On-Site Battery Storage

On-site battery storage can be readily integrated with your facility's on-site solar power generation system, and under certain financing options, you pay a constant monthly utility rate that is lower than your current utility rate for the long lifetimes of these systems—25 years or more.

Full depreciation write-offs, lower tax rates, and federal and state incentives already provide added financial benefits for companies and organizations to go solar, and on-site battery storage can generate extra savings for many on-site solar installations.

## Financing Options Available

*Solar installations can be funded through one of three major options:*

### 1. SELF-FUNDING:

#### New 100% Depreciation Tax Rules Provide Substantial Tax Benefits

- Under the new 2018 tax law, companies can now write off 100% of the capital costs of a solar power installation in the first year, which can provide substantial tax savings.
- These benefits are further enhanced when combined with the new, lower 21% corporate tax savings and 30% federal tax credit for solar installations, and various available state and local funding incentives.

### 2. LEASING:

#### Off-Balance Sheet Financing With Tax and Depreciation Benefits

Companies also have the option of financing their solar installation under either a capital or operating lease option:

- Under a capital lease, payments are applied to the total cost of the solar installation. At the payoff of the lease, the company then owns the solar installation outright.
- With an operating lease, companies make payments over a 7-10 year term, with a residual payment at the end of the lease term. This option enables a company to keep the cost of its solar implementation off its balance sheet, and still take the tax and depreciation benefits.

### 3. POWER PURCHASE AGREEMENT (PPA):

#### Pay a Single Low Monthly Rate for the Life of the System

- Under a Power Purchase Agreement (PPA), a solar installation is financed by a third-party investor group, who owns the installation and sells power to you at a rate that is lower than the rate you now pay for utility-generated power.  
**NOTE:** Donors can fund a portion of the project, reducing the amount to be financed for the PPA and reducing the cost of electricity to a university. The donor receives the interest, tax and depreciation benefits.
- Owners gain the benefit of a solar implementation without bearing any out-of-pocket costs, in exchange for agreeing to buy solar power under the PPA for the lifetime of the agreement, usually 25 years.
- Maintenance costs and other risks are transferred away from the company using the system to the third-party owner. The third-party owner then bears the risk of providing the solar power available from the system to the company user, who only pays for the actual electricity they receive and use.
- Electric rates are set at levels which are lower than electric utility rates, offering business owners immediate savings with no capital outlay, and predictable energy rates for the life of the system.

Contact us to learn more about how we can help you plan and implement a successful on-site power implementation.