

Top 5 Facts

HOW UTILITY-SCALE SOLAR ENHANCES THE GRID



1. Solar is the Cheapest Source of New Generation

While conventional baseload resources have historically been used to ensure a cost-effective power mix, utility-scale solar power prices have plummeted in the last few years, making it the lowest-cost source for new electricity generation available today.



2. Utility-Scale Solar Provides Grid Flexibility

Through smart controls, including curtailment targeted to provide reserves, solar can be used to create cost-effective flexible capacity that supports supply and demand balancing.



3. Solar PV Plants Support Grid Reliability

Utility-scale solar PV plants support grid reliability by providing NERC-recommended features such as ramping capability, voltage support, fault ride-through and other services, in some cases more effectively than conventional plants.



4. Utility-Scale Solar Provides Essential Grid Services

Unlike rooftop solar, utility-scale solar plants are controllable and can provide flexible grid services like frequency regulation that allow system operators to respond quickly and strategically to changing conditions.



5. High Solar Penetration is Possible Today

Even without energy storage, solar can achieve significant penetration on the grid economically. With decreasing energy storage costs, solar energy can be cost-effectively dispatched like conventional plants, even when the sun is not shining, enabling the addition of even more clean energy on the grid.