

The Monetary Value of Energy Resilience: The Cost of Power Outages and Their Impact on Your Organization



All of us have experienced major electrical power outages due to infrequent weather events, such as storms or summer heat waves. However, sporadic outages, occurring at any time, can be even more costly and damaging to businesses, manufacturers, campuses, and health care facilities.

U.S. Businesses and Organizations Lose Billions Each Year Due to Electrical Power Outages

The cost of power outages to businesses, campuses, manufacturers, hospitals, and other facilities is significant. Nationwide, commercial enterprises experience over 1.97 million power outages each year across the U.S., according to the American Council for an Energy-Efficient Economy (ACEEE). The cost of these outages is \$79 billion annually, according to a 2006 Lawrence Berkeley National Laboratory study. Other sources estimate these losses reach well beyond \$100 billion each year.



The Costs of Each Utility Power Outage Can Be Significant to Medium and Large Commercial and Industrial Facilities

SOURCE: AMERICAN COUNCIL FOR AN ENERGY-EFFICIENT ECONOMY STUDY, "VALUING DISTRIBUTED ENERGY RESOURCES: COMBINED HEAT AND POWER AND THE MODERN GRID," (PAGE 32) 2018.

	MOMENTARY	30 MINUTES	1 HOUR	4 HOURS	8 HOURS	16 HOURS
COST PER EVENT	\$12,952	\$15,241	\$17,804	\$39,458	\$84,083	\$165,482

Hidden costs of power outages include lost employee productivity, and the additional time and costs required to re-start operations, re-configure equipment, and clear equipment of in-process raw materials.

On-Site Power: Achieving Energy Resilience and Eliminating Utility Outage Costs

On-Site Combined Heat and Power (CHP) systems provide a cost-effective solution to eliminating the costs of electrical power outages for your building, campus, plant, or other facility.



Avoiding Business Costs of Utility Power Outages: Significant Additional Savings from On-site CHP Power

The additional costs of a power outage to your business or facility, which include lost production, loss of revenue, employee productivity losses, production reboot times, wasted materials and many other costs, are often equal to as much as an additional 70% of the energy cost savings from using on-site CHP systems.



Consider Your Hidden Costs to Assess the True Cost of Electrical Power Outages to Your Business

ORGANIZATION TYPE	INITIAL DOWNTIME COST	ADDITIONAL HIDDEN COST ELEMENTS
Manufacturing	<ul style="list-style-type: none"> • Lost production time • Lost personnel time 	<ul style="list-style-type: none"> • Additional start-up time required to reach full, pre-outage production rates • Time to clear/clean production equipment • Time required to re-start production equipment • Wasted raw materials • Potential damage to electronics in plant machinery
Hospitals and Health Care Facilities	<ul style="list-style-type: none"> • Risk to patients • Reduced patient care • Lost productivity 	<ul style="list-style-type: none"> • Potential patient liability risk • Lost revenue and lowered productivity from ancillary department shutdowns (labs, radiology, etc.) during outages
Colleges and Universities	<ul style="list-style-type: none"> • Disrupted classes • Lost productivity for staff 	<ul style="list-style-type: none"> • Potential student and staff liability risk • Additional time required for staff and students to return to class • Food spoilage loss due to lack of refrigeration in dining facilities
Corporate Office / Multi-Tenant Buildings	<ul style="list-style-type: none"> • Lost productivity 	<ul style="list-style-type: none"> • Additional time required for staff to return and resume normal operations • Lowered productivity from staff leaving building due to lack of AC, heat, lighting, and Internet/phones