

Why Energy-Efficient Communities are *More Resilient*

Energy efficiency can make communities more resilient by strengthening energy systems and providing more-reliable and affordable energy to local governments, households, and businesses. Its potential as a resilience building tool is clear when all its benefits are viewed together. Energy efficiency helps reduce vulnerability to the diverse hazards a community may encounter, like a hurricane or even economic volatility, and increases the community's capacity to cope with the damaging impact of those hazards.

Benefit Types



Emergency response and recovery

Energy efficiency can help communities respond to and recover from emergencies and disturbances, through measures like combined heat and power (CHP), which keeps lights on, or well-insulated buildings, which allow residents to shelter in place.



Social and Economic

Social and economic conditions can make communities more susceptible to the effects of disturbances. Energy efficiency addresses some of these conditions, improving the everyday resilience of households and the local economy.



Climate mitigation and adaptation

Energy efficiency can also mitigate climate change by decreasing carbon pollution and help communities adapt to the impacts of climate change.

Energy efficient buildings

Allows residents/tenants to shelter in place longer, reduces annual energy spending, and reduces overall net emissions. Can help vulnerable populations avoid dangerous and occasionally life-threatening situations in which weather and economics present a dual threat

Green infrastructure

Reduces localized flooding due to storms, energy demand, and the urban heat island effect

Microgrids

May disconnect from grid during power outage, maintaining power supply; allows facilities receiving backup power to double as shelter for displaced residents; reduces overall net emissions; and potentially increases cost savings

Transit-oriented development

Increases economic development opportunities, provides transportation cost savings and reduces impacts of price volatility, and may improve air quality

Combined heat and power

Provides backup power, allows facilities receiving backup power to double as shelter for displaced residents, reduces overall net emissions, and potentially increases cost savings

Cool roofs and surfaces

Reflective and lighter-colored surfaces reduce urban heat island effect, electricity demand, and overall net emissions

District energy systems

Underground system pipes steam, hot water, or chilled water to buildings from nearby energy source and reduces peak power demand through thermal energy storage

Utility energy efficiency programs

Increases reliability and reduces utility costs

Transportation alternatives

Multiple transportation modes can be used during evacuations and everyday disruptions

