

Nuclear and Renewable Fact Sheet

America's energy production infrastructure is aging, and by 2030, a total of 65 thousand megawatts of capacity is expected to be retired, virtually all fossil fired. Coal-fired and natural-gas-fired plants account for about 50 percent and 40 percent, respectively, of these capacity additions. According to the EIA, about eight percent of the expected capacity expansion consists of renewable generating units and two percent of nuclear.

Whereas fossil fuels are exhaustible, renewable energy sources—water (hydropower), biomass, wind, heat from the earth (geothermal), and the sun (solar energy)—regenerate and can be sustained indefinitely. “Green” renewables contribute much less to global warming and climate change by offsetting fossil fuels used to generate electricity.

One example of a renewable energy resource includes hydroelectric power. Hydroelectric power units use flowing water to spin a turbine connected to a generator. In a falling water system, water is accumulated in reservoirs created by dams, then released through conduits to apply pressure against the turbine blades to drive the generator. In a run-of-the-river system, the force of the river current applies the pressure to the turbine blades to produce electricity. In 2005, hydroelectric generation had the fourth largest share (6.5 %) of electricity production at 270 billion kWh.

Did you know this about renewable and nuclear power?

Renewable and other Non-Conventional Sources

Non-water renewable and other non-conventional sources of electricity generation presently contribute only small amounts (about 2.7 %) to total power production. These sources include:

Geothermal
Refuse
Waste heat
Waste steam
Solar
Wind
Wood
Blast furnace gas
Batteries
Chemicals

Electricity generation from these sources in 2005 totaled 109 billion kWh.

Nuclear

Nuclear generating units accounted for the second largest share of electricity generation in the United States in 2005—782 billion kWh or 19.3 percent

Lost Efficiency

In 2005, approximately 40 quadrillion btu (quads) of energy were used to generate electricity

Roughly one-third of this was converted into the 12.5 quads of electricity which ultimately reached end-users (3,816 billion kilowatthours)

The other two-thirds of the energy used to generate electricity was mostly waste heat and dissipated into the environment

This lost energy and America's reliance on fossil fuels inspire organizations like the Energy Advocates to help educate consumers on nuclear and renewable energy sources in order to ensure a strong and sustainable future for America's energy supplies.

The Energy Advocates promotes education and energy security for a strong America.

The Energy Advocates—America Needs America's Energy!

All Forms.

All American.