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How big is a gigaton of CO₂?

Technology	Actions that Provide 1 Gigaton per Year of Mitigation ¹
Coal-Fired Power Plants with CCS	Build 503 500-MW coal-fired power plants with carbon capture and storage (CCS) (assumes 90% capture, 25% parasitic energy loss & 70% capacity factor (CF)) to replace 377 500-MW coal-fired plants w/o CCS (70% capacity factor)
Nuclear	Build 127 1-GW nuclear power plants (90% capacity factor) to replace 327 500-MW coal plants <u>OR</u> build 280 nuclear plants to replace 719 500-MW NGCC plants meeting EPA's New Source Performance Standard (NSPS) (70% capacity factor)
NGCC	Install 599 500-MW NGCC plants to replace the same number of 500-MW coal plants
Wind Energy	Build 163,400 2-MW wind turbines (35% capacity factor) to replace 327 500-MW coal-fired power plants <u>OR</u> build 359,500 wind turbines to replace 719 500-MW NGCC plants meeting EPA NSPS
Concentrated Solar Power	Build 1,090 300-MW CSP plants (35% capacity factor) to replace 327 500-MW coal-fired power plants <u>OR</u> build 2,397 CSP plants to replace 719 500-MW NGCC plants
Geologic Sequestration	Construct the equivalent of 1,000 sequestration sites like Norway's Sleipner project (1 MMtCO ₂ /year)
Auto Efficiency	Replace 485 million cars averaging 25 miles per gallon (mpg) of E10 with the same number of cars averaging 50 mpg (12,000 miles per year) <u>OR</u> replace 242 million cars averaging 25 mpg with the same number of zero emission vehicles charged exclusively from non-emitting power sources
CO ₂ Storage in New Forest	Convert to new forest a barren area about 2.5 times the total land area of the State of Washington (over 100 million acres) (Assumes Douglas Fir on Pacific Coast)

¹ Based on 2017 U.S. data.