

Watergy (Water/Energy) Cost Calculator

for You and Your Community

How many gallons of water does it take to produce one kWh of energy from each of the following sources?

Source:	gal/kWh
Hydroelectric (high)	56.000
Hydroelectric (low)	30.078
Solar Thermal (Calif)	0.900
Nuclear	0.785
Coal	0.510
Natural Gas (SC) ⁵	0.415
Landfill	0.350
Biofuel	0.350
Solar Thermal (Ariz)	0.311
Natural Gas (CC) ⁵	0.195
Geothermal	0.005
Solar PV	0.001

The average American household uses 920 kWh of electricity/**month**,² while an average Arizona household uses 1095 kWh/**month**.² If the electricity for one such household³ came solely from each source below, how much water would be used by each household per **month**?

Source:	gal/mo U.S.	gal/mo AZ
Hydroelectric (high)	51,520	61,320
Hydroelectric (low)	27,672	32,935
Solar Thermal (Calif)	828	986
Nuclear	722	860
Coal	469	558
Natural Gas (SC) ⁵	382	454
Landfill	322	383
Biofuel	322	383
Solar Thermal (Ariz)	286	341
Natural Gas (CC) ⁵	179	214
Geothermal	5	5
Solar PV	1	1

How many gallons of water **per month** would an average U.S. community³ of x households use to generate its electricity if all its electricity came from each source listed below?

Excel users: Fill in top purple box w/ # of h'holds in your area

	#H'holds in ??	#Tucson H'holds: ⁴
	0	200,845
Source:		
Hydroelectric (high)	0	12,315,815,400
Hydroelectric (low)	0	6,614,912,421
Solar Thermal (Calif)	0	197,932,748
Nuclear	0	172,641,341
Coal	0	112,161,890
Natural Gas (SC) ⁵	0	91,268,989
Landfill	0	76,973,846
Biofuel	0	76,973,846
Solar Thermal (Ariz)	0	68,396,761
Natural Gas (CC) ⁵	0	42,885,429
Geothermal	0	1,099,626
Solar PV	0	219,925

1. Water Costs of Electricity in Arizona, a Project Fact Sheet from the Arizona Water Institute (Tucson AZ), from a 2007 investigation by Pasqualetti & Kelley. Fact sheet ID: AWI-07-102 Pasqualetti. // 2. www.eia.doe.gov/cneaf/electricity/esr/table5.html // 3. Both U.S. & AZ figures calculated using AZ watergy info, but keep in mind that water lost to evaporation in colder and/or more humid climates will be lower than in Arizona. See Pasqualetti for further discussion. 4. 2008 estimate, www.census.gov // 5. Natural Gas (SC) = single-cycle natural gas & Natural Gas (CC) = combined-cycle natural gas.