

Watergy (Water/Energy) Cost Calculator

for You and Your Community

How many liters of water does it take to produce one kWh of energy from each of the following sources?¹

Source:	l/kWh
Hydroelectric (high)	211.983
Hydroelectric (low)	113.858
Solar Thermal (Calif)	3.407
Nuclear	2.972
Coal	1.931
Natural Gas (SC) ⁵	1.571
Landfill	1.325
Biofuel	1.325
Solar Thermal (Ariz)	1.177
Natural Gas (CC) ⁵	0.738
Geothermal	0.019
Solar PV	0.004

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:	l/mo U.S.	l/mo AZ
Hydroelectric (high)	195,024	232,121
Hydroelectric (low)	104,749	124,674
Solar Thermal (Calif)	3,134	3,731
Nuclear	2,734	3,254
Coal	1,776	2,114
Natural Gas (SC) ⁵	1,445	1,720
Landfill	1,219	1,451
Biofuel	1,219	1,451
Solar Thermal (Ariz)	1,083	1,289
Natural Gas (CC) ⁵	679	808
Geothermal	17	21
Solar PV	3	4

How many liters 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
Source:	0	200,845
Hydroelectric (high)	0	46,620,432,942
Hydroelectric (low)	0	25,040,167,536
Solar Thermal (Calif)	0	749,256,958
Nuclear	0	653,518,569
Coal	0	424,578,943
Natural Gas (SC) ⁵	0	345,490,708
Landfill	0	291,377,706
Biofuel	0	291,377,706
Solar Thermal (Ariz)	0	258,909,904
Natural Gas (CC) ⁵	0	162,339,008
Geothermal	0	4,162,539
Solar PV	0	832,508

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.