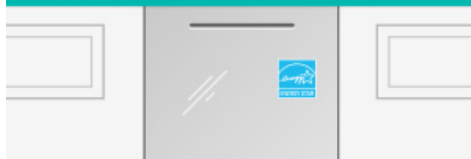
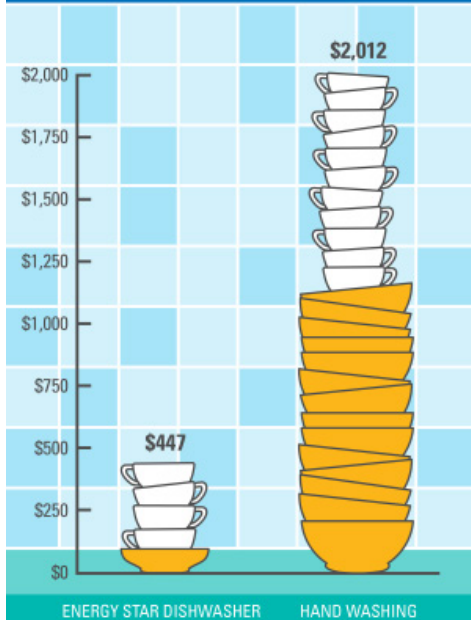


To pre-rinse or not... the dishwasher debate



LIFETIME OPERATING COSTS* ENERGY STAR® CERTIFIED DISHWASHER vs. HAND WASHING



Hand washing your dishes costs about \$1,500 more in energy and water than using an ENERGY STAR certified dishwasher.

LEGEND



*Assumed average dishwasher lifetime of twelve years.



ENERGY STAR is the simple choice for energy efficiency. For more than 25 years, EPA's ENERGY STAR program has been America's resource for saving energy and protecting the environment. Join the millions making a difference at energystar.gov.

source: <https://www.energystar.gov/products/dishwashers>
Energy.gov has a similar lifetime performance table for residential dishwasher models. The electricity price is \$0.09/kWh (average for US federal facilities) with an annual energy use for an ENERGY STAR dishwasher of 270kWh. The annual water use is based on a combined water and sewer rate of \$5/1000 gallons (average for US federal facilities) and a per-cycle use of 3.5 gallons.

According to the USGS*, dish washing by hand can use between 9-27 gallons. Not sure how much you're using? Time how many minutes it takes to fill your sink basins and/or to rinse.

Dishwashers made post-2013 use less than 5 gallons per cycle. ENERGY STAR-certified units use less than 3.5 gallons. Even units from the 1990s use 10-15 gallons.

A kitchen sink puts out around 2.5 gallons a minute. To out-do a dishwasher you'd have to wash and rinse an entire load of dishes using two-minutes worth of running water.

A 2021 Lawrence Berkley National Labs Study reported that of 1,201 respondents, 55% scraped and pre-rinsed their dishes before using the machine.

Hand washing is time and water intensive. ENERGY STAR estimates you can use 8,000 gallons of water and 230 hours (nearly 10 days!) of your time during just one year standing at your sink.

Dishwashing has advanced:

- Most dishwasher detergents are made with enzymes that cling to food bits to clean best.
- In modern dishwashers, sensors detect how dirty your dishes are and adjust cleaning strength accordingly. If you're pre-rinsing, you could be fooling your dishwasher and not getting the clean you think you are...

Not convinced? Give these tips a try before you go back to pre-rinsing:

- ☛ Scrape food off the dishes first.
- ☛ In the dishwasher, aim dirtiest surfaces down and toward the wash arms.
- ☛ Cleaning action is strongest on the bottom rack. Because the washing arms are circles, place dirtier dishes in the central parts of racks, not buried in the corners.
- ☛ Try different detergents. It's all dependent on age of dishwasher, hardness or softness of water, and how long that pasta has been glued to the bowl.
- ☛ Clean your machine: clear the filter at the bottom, make sure the spray arm water jets aren't blocked, run a sanitize cycle to degrease any residue and grime.
- ☛ Not all dishwashers are the same. Load dishes based on design recommendations.

*<https://water.usgs.gov/edu/activity-percapita.php>