

**RESOURCE**

Maintenance, Repair, and Lifetime Framing

An upfront price tells you what you pay on day one. It says nothing about what you will pay to keep the equipment running over the years you own it, and a cheaper purchase with higher maintenance can cost more in total than a pricier one that needs less upkeep.

HVAC maintenance as an ongoing cost, not an afterthought

The [HVAC maintenance cost comparison engine](#) compares expected annual maintenance across equipment types directly, which is a line item easy to leave out of a quick comparison focused only on installed cost and efficiency.

Water heaters accumulate cost differently over their life

The [water heater lifetime cost engine](#) totals installed cost, energy cost, and maintenance across a full typical service life, which is the fairer basis for comparing a cheaper unit against a pricier, more efficient one.

Battery degradation is a form of lifetime cost too

The [battery degradation cost engine](#) prices the gradual decline in a battery's usable capacity over its life, a cost that does not show up as a bill you pay but does show up as reduced value delivered in later years.

EV charging equipment has its own lifetime profile

The [EV charger lifetime cost engine](#) applies the same full-horizon framing to charging equipment, including any expected maintenance or eventual replacement, rather than stopping at the installation invoice.

Solar's lifetime view already assumes decline

The [solar lifetime savings engine](#) incorporates panel degradation over a full ownership horizon by default, since a solar system's output is not constant across its life, which the [solar output and export value resource](#) covers in more depth.

The comparison rule this all supports

Never compare two options on installed cost alone if their maintenance profiles differ meaningfully. Add expected annual maintenance and any known degradation into the total cost before ranking options, the same way you would add financing charges; leaving either out is an incomplete comparison, not a conservative one.