RESULTS OVER TIME

Accurate rate escalation prediction is impossible

…But electric rates will probably keep going up.

Natural disasters

Rising interest rates

Greed and corruption

Vegetation management

Carbon-neutrality mandates

Grid resiliency improvements

Closures of old power plants

Electrification

Community choice aggregation

Grid defections

Deregulation

Grid regionalization

More SPRs

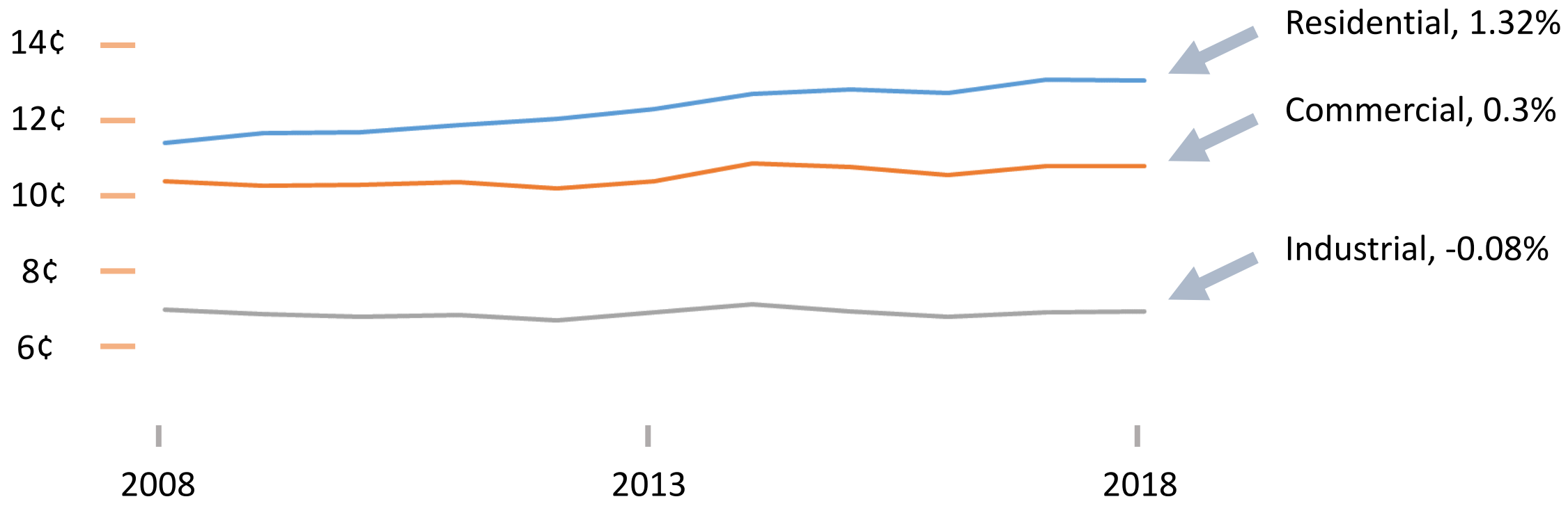
More regulation

Utility company restructuring

And more!

Utility-scale energy storage

U.S. electric rate escalation — 2008 to 2018



Data: U.S. Energy Information Administration

Rate escalation vs. general inflation

Inflation: A general increase in prices,

and a decrease in the purchasing power of a dollar.

Years 2008 to 2018	Average increase per year
General inflation	1.75%
Residential rate escalation	1.32%
Commercial rate escalation	0.03%

(Average inflation from 1914 to 2018 was 3.2%.)

Inflation-data source: US Inflation Calculator

Model a future rate plan?

Grandfathering

An old rule still applies in some existing situations, while a new rule applies to all future cases.

Those exempt from the new rule are “grandfathered in”.

NEM grandfathering

This is an important protection.

17,000 Nevada solar customers abruptly lost net metering in late 2015.

(After a backlash, it was restored with 20-year grandfathering.)

Data and image: [Vox]

Model a future PV-crediting policy?

PV production over time

Typical modules degrade less than half a percent per year.

Degradation isn’t always linear.

The degradation rate can be one percent or more in:

Data: NREL PV Degradation Report
Images: Fortnite

Array cleaning

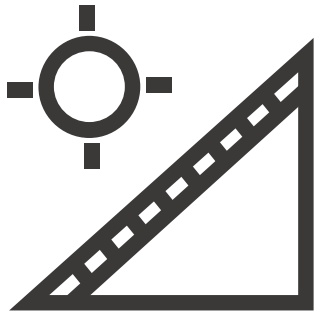
Without regular cleaning, losses can be over 20%.

Weigh the cleaning cost vs. the performance hit without cleaning.

Consider:

Rainfall

Wind-blown dust



Array tilt

Value per solar kWh

Other potential recurring costs

A property tax increase.

(Most states offer property tax exemptions for PV.)

A fire-and-loss insurance premium increase.

(Many insurers don’t increase premiums because of rooftop PV.)

RESULTS OVER TIME