

DID COMMERCIAL BUILDINGS ACTUALLY GET MORE EFFICIENT?

Electricity used per square foot by building type across the whole US commercial stock, six years apart. Most types improved. One used more.

Claire Densmore · APXXO Data — energy · 16 September 2026

DATA AS AT	LAST CHECKED	MEASURED IN	ROWS
CBECS 2018	2026-09-16	% change in electricity per square foot, 2012–2018	16

-13.7%

ACROSS THE ENTIRE US COMMERCIAL STOCK

14.6 kWh per square foot in 2012, 12.6 in 2018. The efficiency work landed.

1 of 16

BUILDING TYPES THAT USED MORE ELECTRICITY

Food sales +9.4%.

-16.6%

PUBLIC ASSEMBLY IMPROVED MOST

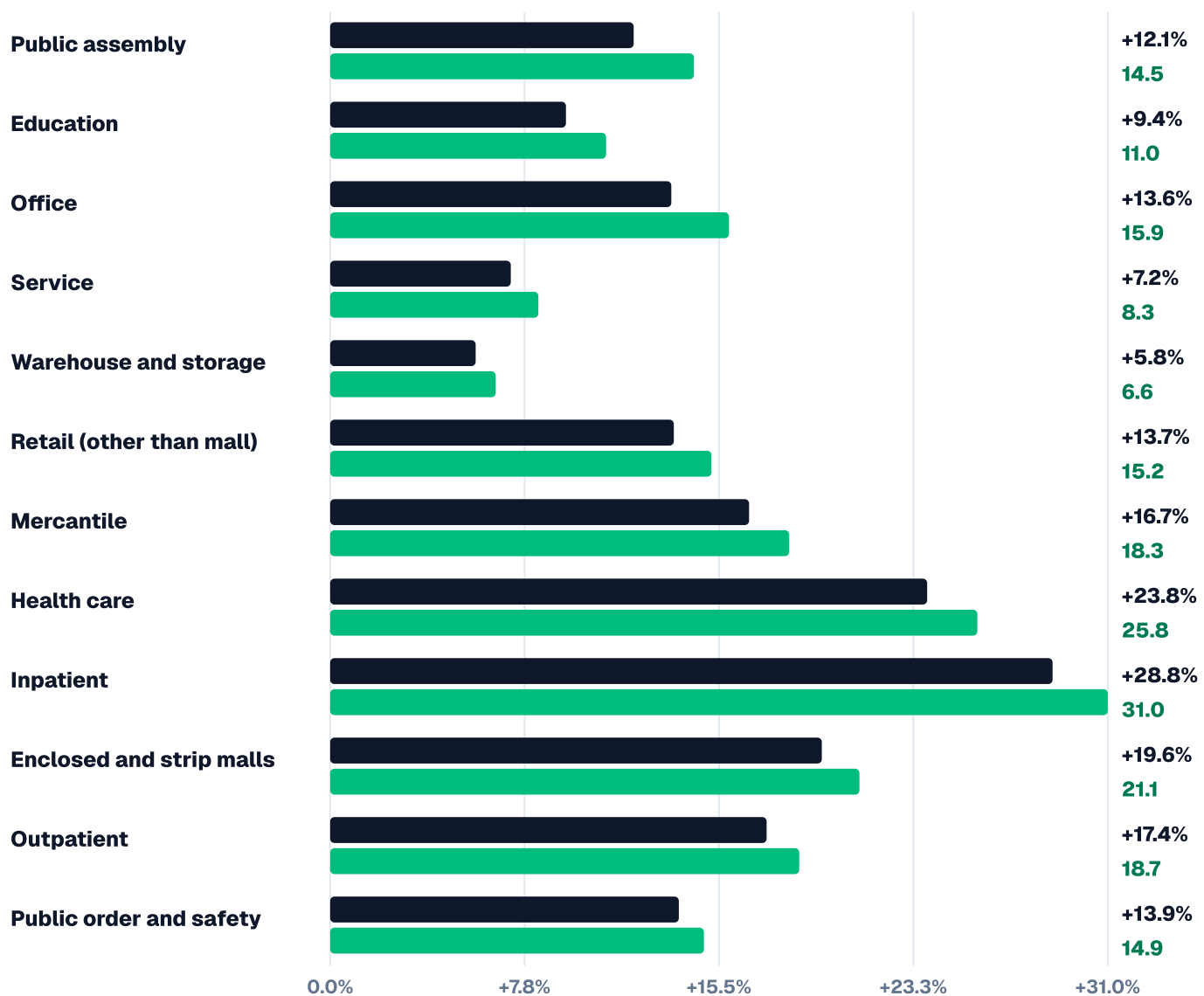
14.5 down to 12.1 kWh per square foot.

AT A GLANCE

TOP 12 OF 16

Electricity per square foot in 2012 against 2018, on the same scale. Where the green bar is longer, that building type got less efficient.

■ 2018 (KWH/SQ FT) ■ 2012 (KWH/SQ FT)



WHAT THE FIGURES SHOW

The efficiency work landed, across almost everything

The entire US commercial building stock used 13.7% less electricity per square foot in 2018 than in 2012: 14.6 kWh per square foot down to 12.6. Over six years, across millions of buildings, that is a substantial result.

15 of the 16 building types improved. Public assembly improved most, from 14.5 to 12.1 kWh per square foot.

The whole American commercial stock got 14% more efficient per square foot in six years. The lighting retrofits worked.

Except food sales

Food sales used 9.4% more electricity per square foot than six years earlier, against a stock-wide fall of 13.7%.

Refrigeration is the obvious suspect: a building type dominated by cold storage and display cases cannot retrofit its way out of its main load the way an office can replace lighting. The measure that works for an office does not exist for a chiller aisle.

It is the exception that makes the rest meaningful. A uniform fall across every category would suggest a measurement artefact; a fall everywhere except the most refrigeration-intensive category suggests the improvement is real and its limits are physical.

What it means for the buildings we work in

Hotels, hospitals and food service are the three types that matter most to facility management. Their intensities in 2018 were lodging 14.4, inpatient 28.8, food service 43.8 kWh per square foot.

Those gaps are far wider than the improvement over time, which is the practical point: what a building does still determines its energy cost far more than when it was last refurbished. **What that intensity costs in each state** (</en-us/data/commercial-electricity-cost/>) turns it into money.

What a building does still matters more to its energy bill than how recently it was upgraded.

What this is useful for, and what it is not

These are national averages by building type. Climate, age, operating hours and occupancy all move an individual building a long way from them, and nothing here adjusts for a warmer decade or for buildings that changed use.

CBECS runs roughly every six years, so this is two snapshots rather than a trend line, and the 2012 round predates most commercial LED adoption. A third vintage for 2003 exists and is left out because it is published in a format this pipeline cannot read.

HOW WE WORKED THIS OUT

Both figures are the electricity intensity column of Table C14 of the EIA Commercial Buildings Energy Consumption Survey, for 2012 and 2018, by principal building activity.

CBECS is a survey of the whole US commercial building stock — 5.9 million buildings in the 2018 round — so these are national averages for a building type, not measurements of any particular building.

The figures are transcribed from the two published spreadsheets, each value carrying the file and release date it came from. CBECS updates about twice a decade, so a table behind a network call would add fragility without adding freshness.

A third vintage exists for 2003, which would make this a twenty-year comparison. It is published as a legacy binary spreadsheet that this pipeline cannot read, so it is left out rather than approximated.

"Other" and "Vacant" are excluded: they are residual categories rather than building types.

THE NUMBERS

16 ROWS · AS AT CBECS 2018

REGION	% CHANGE IN ELECTRICITY PER SQUARE FOOT, 2012–2018	2012 (KWH/SQ FT)	2018 (KWH/SQ FT)	2018 METRIC (KWH/M²/YR)
Public assembly	–16.6%	14.5	12.1	130.2
Education	–14.5%	11.0	9.4	101.2
Office	–14.5%	15.9	13.6	146.4
Service	–13.3%	8.3	7.2	77.5
Warehouse and storage	–12.1%	6.6	5.8	62.4
Retail (other than mall)	–9.9%	15.2	13.7	147.5
Mercantile	–8.7%	18.3	16.7	179.8
Health care	–7.8%	25.8	23.8	256.2
Inpatient	–7.1%	31.0	28.8	310.0
Enclosed and strip malls	–7.1%	21.1	19.6	211.0
Outpatient	–7.0%	18.7	17.4	187.3

REGION	% CHANGE IN ELECTRICITY PER SQUARE FOOT, 2012–2018	2012 (KWH/SQ FT)	2018 (KWH/SQ FT)	2018 METRIC (KWH/M ² /YR)
Public order and safety	–6.7%	14.9	13.9	149.6
Lodging	–5.9%	15.3	14.4	155.0
Religious worship	–5.8%	5.2	4.9	52.7
Food service	–2.4%	44.9	43.8	471.5
Food sales	+9.4%	48.7	53.3	573.7

WHAT TO TAKE AWAY

American commercial buildings really did get more efficient — 14% less electricity per square foot in six years. The exception is food sales, where the main load is refrigeration and there is no lighting retrofit to make.

WHERE IT CAME FROM

EIA Commercial Buildings Energy Consumption Survey (CBECS), Table C14 (<https://www.eia.gov/consumption/commercial/>)

US federal government — public domain · published approximately every six years

WHEN THIS PAGE CHANGES NEXT

CBECS is run roughly every six years and the 2024 survey has not been published yet. This page changes when it is. The pipeline checks every week and will find nothing for some time, which is the expected result.

LAST CHECKED 16 SEPTEMBER 2026

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Claire Densmore, "Did commercial buildings actually get more efficient?", APXXO, 2026.
<https://apxxo.com/en-us/data/building-energy-efficiency/>

MORE DATA FROM APXXO

AS AT 2026-06

What commercial electricity costs, by US state

Updated monthly. Free to download.

[\(/en-us/data/commercial-electricity-cost/\)](/en-us/data/commercial-electricity-cost/)

AS AT 2025 (PROVISIONAL) · BLS 2025 · FX 2026-09-15

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AS AT AUGUST 2026

What cleaning and laundry have actually cost

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[\(/en-us/data/cleaning-laundry-cost-index/\)](/en-us/data/cleaning-laundry-cost-index/)

ALL DATA PAGES → [\(/EN-US/DATA/\)](/EN-US/DATA/)