When you rent or purchase an apartment, have you ever imagined how much electricity and natural gas your unit will cost? Understanding these factors may help us to know more about our living place.

Firstly, let’s talk about electricity. In 2022, the median of the annual electricity usage in each apartment in New York is 986,685.6 kWh. In the case of the Tesla Model 3, for example, 986,685.6 kWh would allow such an electric car to travel about 4,242,321 miles, which is equivalent to circling the Earth's equator about 170 times.

When we compare this data to the average price of each apartment, you will see the relationships between them are various. It is probably the same as what you thought, the most part of Manhattan and Brooklyn Downtown are extremely expensive. But, what if we look at these data differently?

Let’s put them on the cluster chart, we can find some properties are very expensive but cost very low electricity, whereas some properties are cheap but cost more. So, let’s zoom in.

900 Fifth Ave is a fancy apartment located near Central Park, in Upper East. It is many people’s dream property. It is not a new building, we have traditionally thought of these age’s buildings as not being energy efficient. However, the electricity usage of this building is around median. In the 2000s, 900 Fifth Avenue received financing for renovations and interior upgrades, including an HVAC system upgrade. Additionally, the building has fewer high-electricity-consuming amenities (like large commercial kitchens, extensive outdoor lighting, pools, etc.). According to online reviews, some units used as second homes or investment properties that are often vacant, leading to low electricity consumption.

Next, let’s move to Brooklyn. This apartment is much cheaper than the previous one, but costs four times more electricity per sqft than the previous building. It is a relatively old and small building. Although there have been a couple of appliance upgrades in the past decades, the building has been poorly maintained. It might have issues like leaky windows and inefficient appliances that increase electricity usage. Additionally, this building lacks modern insulation and energy-efficient systems, leading to higher heating and cooling costs.

I also find some buildings have the same Electricity Usage But Different Prices. They have similar electricity usage (around the median of 16.19 kWh/sqft/year).

And also there are another three properties listed below have similar prices (around the median of $713.21/sqft), but their electricity consumption varies. 133-27 39th Avenue (right) consumes the most electricity as it is a modern apartment that utilizes an all-electric energy system, meaning it does not use any natural gas. 832 Knickerbocker Avenue (middle), an older building, has not undergone extensive renovations; however, its relatively small size leads to efficient electricity usage. 2401 Nostrand Avenue (left) has a low renter risk rating (6/100 at augrented.com), indicative of low occupancy, which results in lower average electricity usage.

Let’s talk about natural gas.

The median in 2022 is 3,240,799.9 kBTU, if we build a 1 cubic foot box to hold them and stack them together, these box can almost reach half way to the Moon. Additionally, we can find out that the Upper East buildings are slightly lower natural gas consumption than other places, and also as you know, there is the most expensive region.

This is the cluster chart to compare the prices and the natural gas usage, and let’s look at the most expensive building but cost less natural gas.

Surprisingly, 900 Fifth Avenue again, our old friend. The reason behind this is not only the vacancy as we talked about earlier, but also this property has been starting using the modern heating systems during the past renovations.

Move to Alphabet City, we can find a Cheap Apartment with High Natural Gas Usage. This building is an older building, built in 125 years ago. with infrequent renovations, which results in poor airtightness and inefficient energy use.

I also found some buildings have the Same Natural Gas Usage But Different Price. Although the sizes of these buildings vary, the one on the left is almost 40 times cheaper than the one on the right, but it is extremely well-occupied, whereas the right one has a relatively high vacancy rate, not surprising, it is also near 900 fifth ave.

Finally, some apartments have the same Price But Different Natural Gas Usage. The one on the right side is a newly constructed building, equipped with contemporary kitchen appliances and heaters, which help reduce natural gas consumption.

Have you ever wondered how much energy your apartment uses?

When renting or buying an apartment, it’s not just the price that matters—electricity and natural gas costs can tell us a lot about the building and how efficiently it uses energy. Let’s explore the relationship between building price and energy usage.

Electricity Usage

In 2022, the median electricity usage for apartments in New York was 986,685.6 kWh per year. To put this into perspective, that’s enough electricity to power a Tesla Model 3 for 4.2 million miles, or to circle the Earth 170 times!

When comparing electricity usage with apartment prices, the patterns are interesting. For example:

Some expensive apartments use very little electricity.

Some cheap apartments use a lot more electricity.

Take 900 Fifth Avenue near Central Park, a luxury building. Despite being old, its electricity usage is close to the median. Why? Renovations in the 2000s improved its HVAC systems, and it has fewer high-electricity amenities. Plus, many units are second homes, so they’re often empty, leading to lower energy use.

Now, let’s look at a cheaper building in Brooklyn. This older building uses four times more electricity per square foot than 900 Fifth Avenue. Why? It has poor maintenance, leaky windows, and inefficient appliances, making it much less energy-efficient.

Sometimes, buildings with the same electricity usage have very different prices. For example, some older, small buildings use electricity efficiently because of their size but are still low-cost. On the other hand, modern buildings with high-tech systems may use more electricity but are more expensive.

Natural Gas Usage

Now, let’s talk about natural gas. The median usage in New York apartments in 2022 was 3.24 million kBTU per year—enough to stack boxes halfway to the Moon!

When comparing natural gas usage with building prices, similar patterns emerge:

Expensive buildings, like 900 Fifth Avenue, use less natural gas because of upgrades to modern heating systems and high vacancy rates.

On the other hand, older, poorly maintained buildings, like one in Alphabet City, use much more natural gas due to poor insulation and inefficient heating systems.

Some buildings have the same natural gas usage but very different prices. A cheaper building might be fully occupied, driving up its natural gas consumption, while a more expensive building might have fewer residents, using less gas.

What Does This Mean?

Energy usage is not always tied to price. Renovations, building maintenance, and occupancy rates play a big role. Expensive buildings can sometimes be energy-efficient, while cheap ones can be wasteful. Location and building age also influence these patterns.

Understanding energy usage helps us make better decisions about where to live. After all, it’s not just the rent or mortgage—it’s the hidden energy costs that matter too!