Moore's law is a term used to refer to the observation made by Gordon Moore in 1965 that the number of transistors in a dense integrated circuit (IC) doubles about every two years.

There are three major factors contributing to the slowing rate of growth in processor power, and they're all related.

First, you have electrical leakage. For decades, as transistors got smaller, they became more energy efficient.

Now, however, they have gotten so small, as small as 10 nanometers, that the channel that carries the electrical current through the transistor cannot always contain it.

This generates heat which can wear out the transistors more quickly, making them even more susceptible to leakage.

Heat isn't just limited to one transistor though.

Billions of transistors leaking can seriously threaten the integrity of the whole chip, so the processor must reduce the amount of voltage it takes in or throttle the number of transistors in use to prevent overheating, limiting the processing power of the chip.

Finally, there is the third strike against Moore's law: economics.

When the number of transistors doubles, so does the amount of heat they can generate. The cost of cooling large server rooms is getting more and more untenable for many businesses who are the biggest purchasers of the most advanced processing chips.

As businesses try to extend the life and performance of their current equipment to save money, chipmakers responsible for fulfilling Moore's Law bring in less revenue to devote to R&D—which itself is becoming more expensive.

Without that extra revenue, it becomes much harder to overcome all of the physical impediments to shrinking the transistors even further.

So, it might not be the physical challenges that bring an end to Moore's Law, but simply the lack of demand for smaller transistors.