THE GORBIO POWERHOUSE PROJECT

BITCOIN’S ANNUAL ENERGY CONSUMPTION

Year	Energy Consumption (TWh)
2017	10,19
2018	45
2019	60
2020	67
2021	104
2022	204,5
2023	95,58
2024	146
2025	169,7

Why Has Bitcoin's Energy Consumption Increased or Fluctuated Over the Years?

- **More Miners Join the Network:**
  More people and companies invest in mining every year, increasing electricity usage.

- **Stronger and More Devices:**
  Modern mining hardware is faster but also consumes more power overall.

- **Bitcoin Price Changes:**
  When the price goes up, more miners start working, raising energy demand.

- **Regulations and Country Bans:**
  Mining bans (like in China in 2021) cause drops, but activity shifts to other countries.

- **Type of Energy Used:**
  Some miners use clean energy, others use fossil fuels, which increases consumption.

- **Bitcoin Uses Proof of Work:**
  This algorithm requires a lot of power, unlike newer systems like Proof of Stake.

⚡ What Could We Have Protected with Bitcoin's Energy Use in 2022?

Bitcoin used **204.5 TWh** of electricity in 2022. What could we have done with that energy instead?

🏠 Powering Homes

- The average European household uses **3,500 kWh/year**.
- 204.5 TWh = **58 million homes powered for one year**.

Bitcoin's 2022 energy use could have powered 58 million homes for a whole year.

🌳 Offsetting Carbon with Trees

- 204.5 TWh from coal = **~81.8 million tons of CO_2**.
- One tree absorbs ~21 kg CO_2 per year.
- It would take **~3.9 billion trees** to offset this.

We would need nearly 4 billion trees to absorb the CO_2 from Bitcoin mining in 2022.

🌞 Solar Power Equivalent

- 1 km^2 solar farm generates ~0.1 TWh/year.
- 204.5 TWh = **2,045 km^2 of solar panels**.

To generate the same energy cleanly, we would need a solar farm the size of a small country.