

# - The Cost of AI -

It takes a lot of energy / to **train** an AI. // OpenAI's ChatGPT-4 needed an **estimated** 7,200 megawatt hours / to complete its training / over a period of five to six months. // That is enough energy / to **power** 3,400 Japanese **households** / for one year. // In human **terms**, / a **construction** worker would have to work for 3.4 million years / without any vacation days / to use that much energy. //

As more people use more AIs, / more energy will be needed. // One analyst **predicts** / that "by 2027 the AI sector could **consume** / between 85 to 134 terawatt hours each year," / roughly as much energy as the **Netherlands** requires. //

The construction, maintenance, and **disposal** of datacenters (the body of an AI) requires more than energy. // Large amounts of water are used for cooling, / and the problem of electronic waste / (**responsible for** 70% of global surface-level **toxic pollution**) / has yet to be solved. // We must all remember / that AI does not work **for free**. //

多くのエネルギーが必要だ / AI を訓練するには// OpenAI の ChatGPT-4 は、推定 7,200 メガワット時を必要とした / 訓練を完了させるために / 5~6 ヶ月以上の期間で// それは十分なエネルギーだ / 日本の 3400 世帯に電力を供給するために / 1 年分 // 人間でいえば / 1 人の建設作業員が 340 万年働かなければならない / 一切の休暇なしで / これだけのエネルギーを使うためには //

より多くの人々がより多くの AI を使えば / より多くのエネルギーが必要だ// アナリストが予測している / 「2027 年までに AI 部門は消費するだろう / 毎年 85 から 134 テラワット時を」 // オランダが必要とするエネルギーとほぼ同じだ //

データセンター (AI の本体) の建設、メンテナンス、廃棄には、エネルギー以上のものが要だ// 冷却には大量の水が使用され、/ また電子廃棄物の問題 / (世界中の地表レベルの有害汚染の 70% を占める) / はまだ解決されていない// 私たちは皆、忘れてはならない / AI はタダで働いているわけではないことを//

## Vocabulary and Phrases

train	訓練する	consume	消費する
estimate	見積もる	Netherlands	オランダ
power	力 / 動力を供給する	disposal	処分、廃棄
household	家族、世帯	responsible for	~に責任がある/原因となる
term	期間 / 用語 / 表現	toxic	有毒な
construction	建築、建築物 / 構造	pollution	汚染
predict	予測する	for free	無料で

## Total Number of words used

: 157 words

## Time for 100 wpm

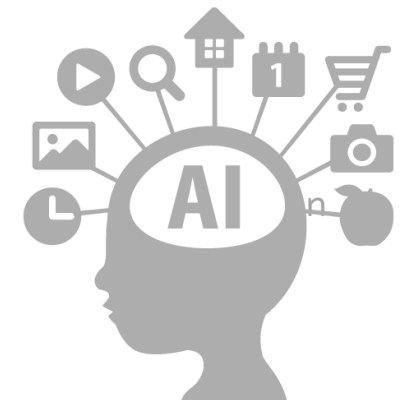
: 94.2 sec.

## Time for 120 wpm

: 78.5 sec.

## Your BEST TIME

: \_\_\_\_\_ sec.



### 【Listen & Fill Blank】

It takes a lot of energy to \_\_\_\_\_ an AI. OpenAI's ChatGPT-4 needed an \_\_\_\_\_ 7,200 megawatt hours to \_\_\_\_\_ its training over a period of five to six months. That is enough energy to \_\_\_\_\_ 3,400 Japanese \_\_\_\_\_ for one year. In human \_\_\_\_\_, a \_\_\_\_\_ worker would have to work for 3.4 million years without any vacation days to use that much energy.

As more people use more AIs, more energy will be needed. One analyst \_\_\_\_\_ that "by 2027 the AI sector could \_\_\_\_\_ between 85 to 134 terawatt hours each year," roughly as much energy as the **Netherlands** requires.

The construction, \_\_\_\_\_, and **disposal** of datacenters (the body of an AI) requires more than \_\_\_\_\_. Large amounts of water are used for cooling, and the problem of electronic \_\_\_\_\_ (**responsible for 70% of global surface-level toxic \_\_\_\_\_**) has yet to be solved.

We must all \_\_\_\_\_ that AI does not work **for free**.

### 【Q&A / A&Q】

**Question 1:** How much energy did it take to train ChatGPT-4

**Question 2:** Why does AI not work for free?

**Question 3:** Do you like AI? Why or why not?

**Ask 1:** 答えが「Netherlands」である質問を英語で書いてください

**Ask 2:** 本文に出てくる **electronic waste** についての質問を英語で書いてください

**Ask 3:** 本文について知りたいことを英語で1つ書いてください

**Sample Answer 1:** 7,200 megawatt hours.

**Sample Answer 2:** It must be powered, cooled, maintained, and disposed of when no longer usable.

**Sample Answer 3:** Yes. AI will make life easier, and become our friend.  
No. AI is dangerous and we shouldn't trust it.

**Sample Question 1:** By 2027, AI is expected to use as much electricity as which country? /

Which country uses 85-134 terawatt hours each year?

**Sample Question 2:** What produces 70% of surface toxic waste? /

Where does electronic waste come from?

How can electronic waste be recycled?

**Sample Question 3:** How much does an AI weigh?

From where comes our energy?

Can AI function without the internet?