



How AI Depends on Energy Sector Development and How Energy Sector Development Is Influenced by AI

Miloslav Nič · Ecomole Ltd Energy in Times of Crisis · 29 September 2026

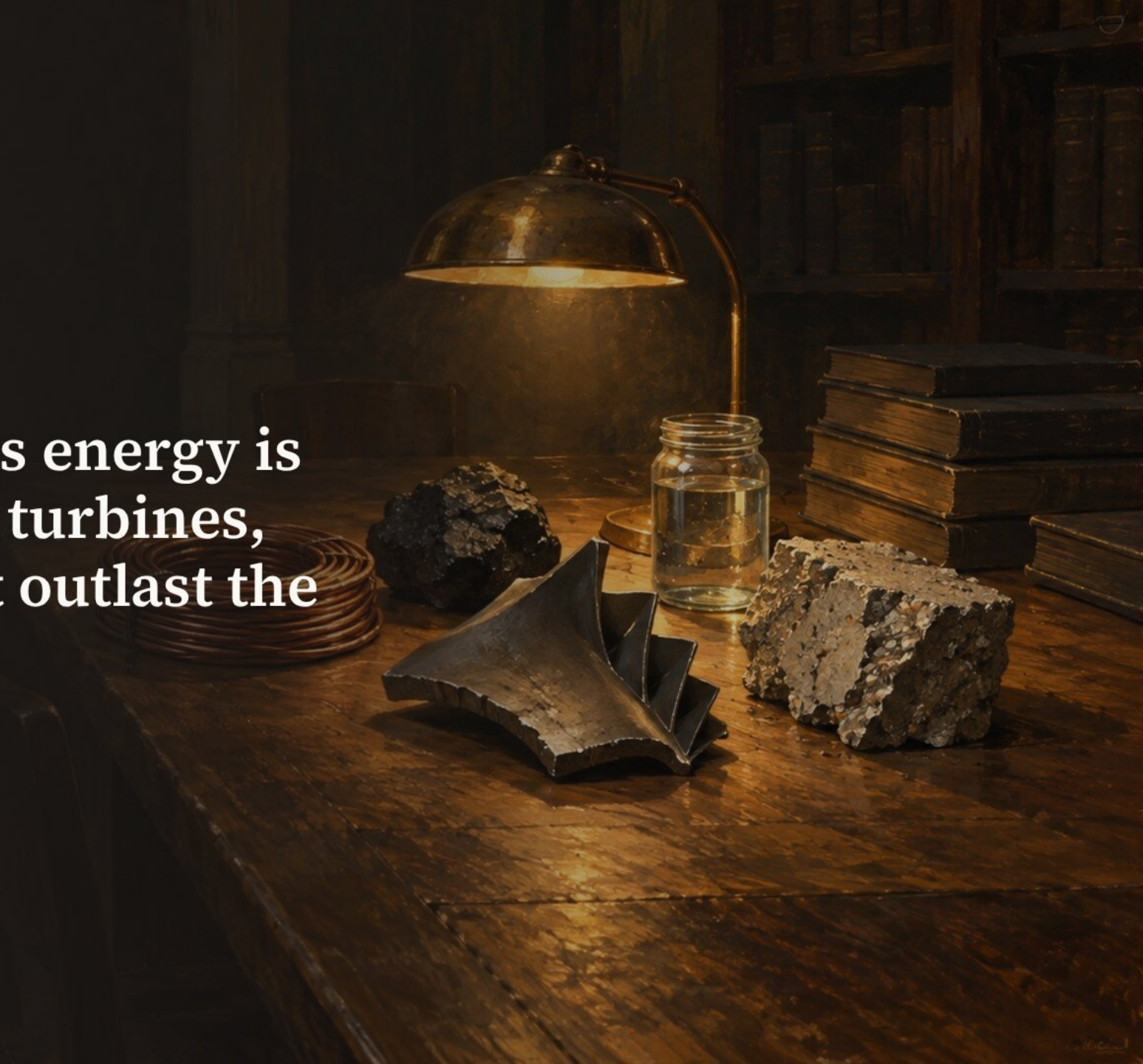
Thought experiments

- Einstein at sixteen, chasing a beam of light (1895)
- Galileo's falling bodies · Maxwell's demon (1867) · Schrödinger's cat (1935)
- Physics runs experiments it cannot yet build
- Why not history? Weber (1906), Fogel (1964), Ferguson (1997) did



The power of objects

AI looks weightless. Its energy is not: concrete, copper, turbines, water, the objects that outlast the words.



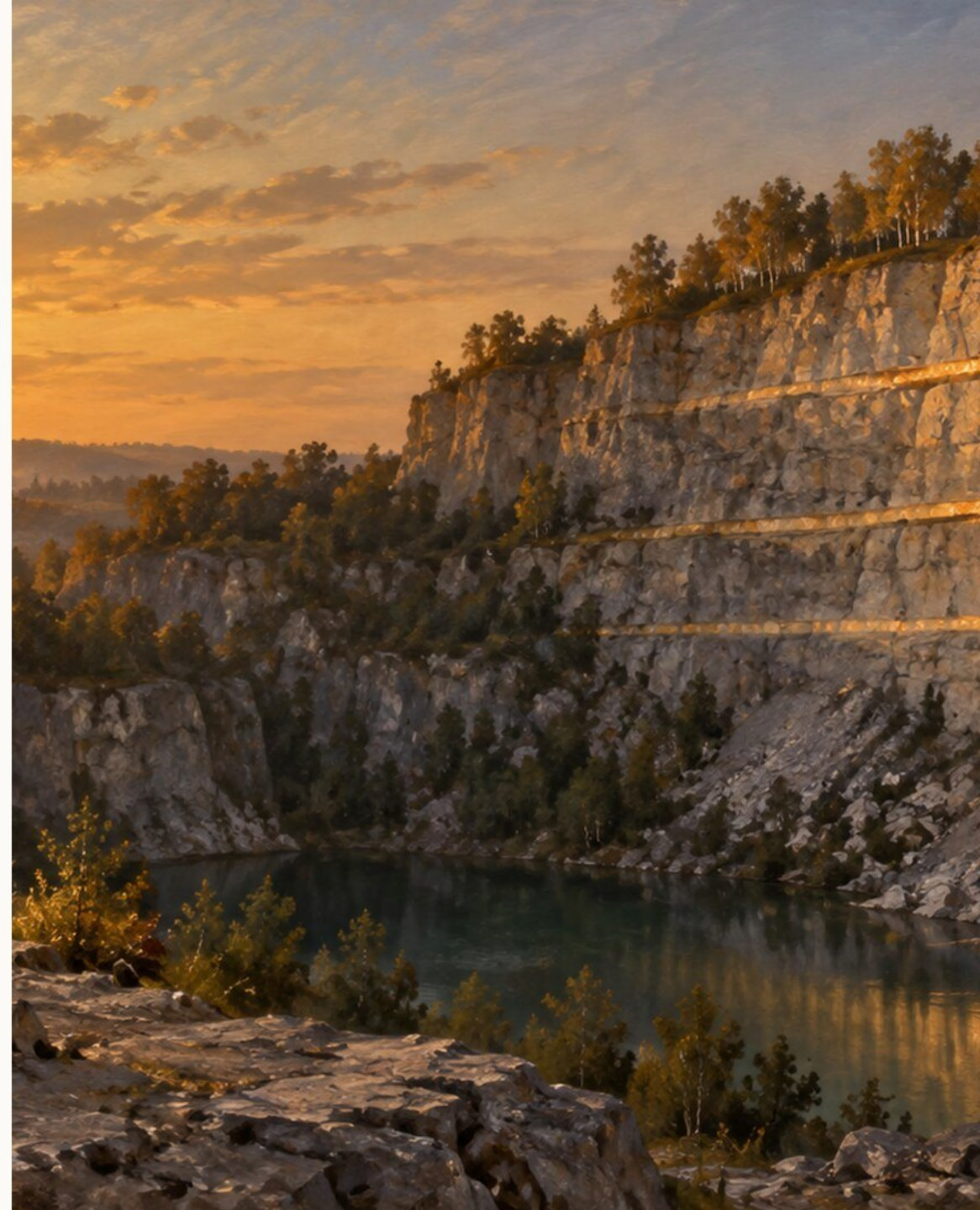
How geologists cut time

- Eons, eras, periods, epochs – a hierarchy of boundaries
- A boundary is one point in one section of rock or ice: a golden spike
- Proposed by the stratigraphers, ratified by the IUGS – about eighty so far
- The Holocene begins 11,700 years ago, in a Greenland ice core (2008)



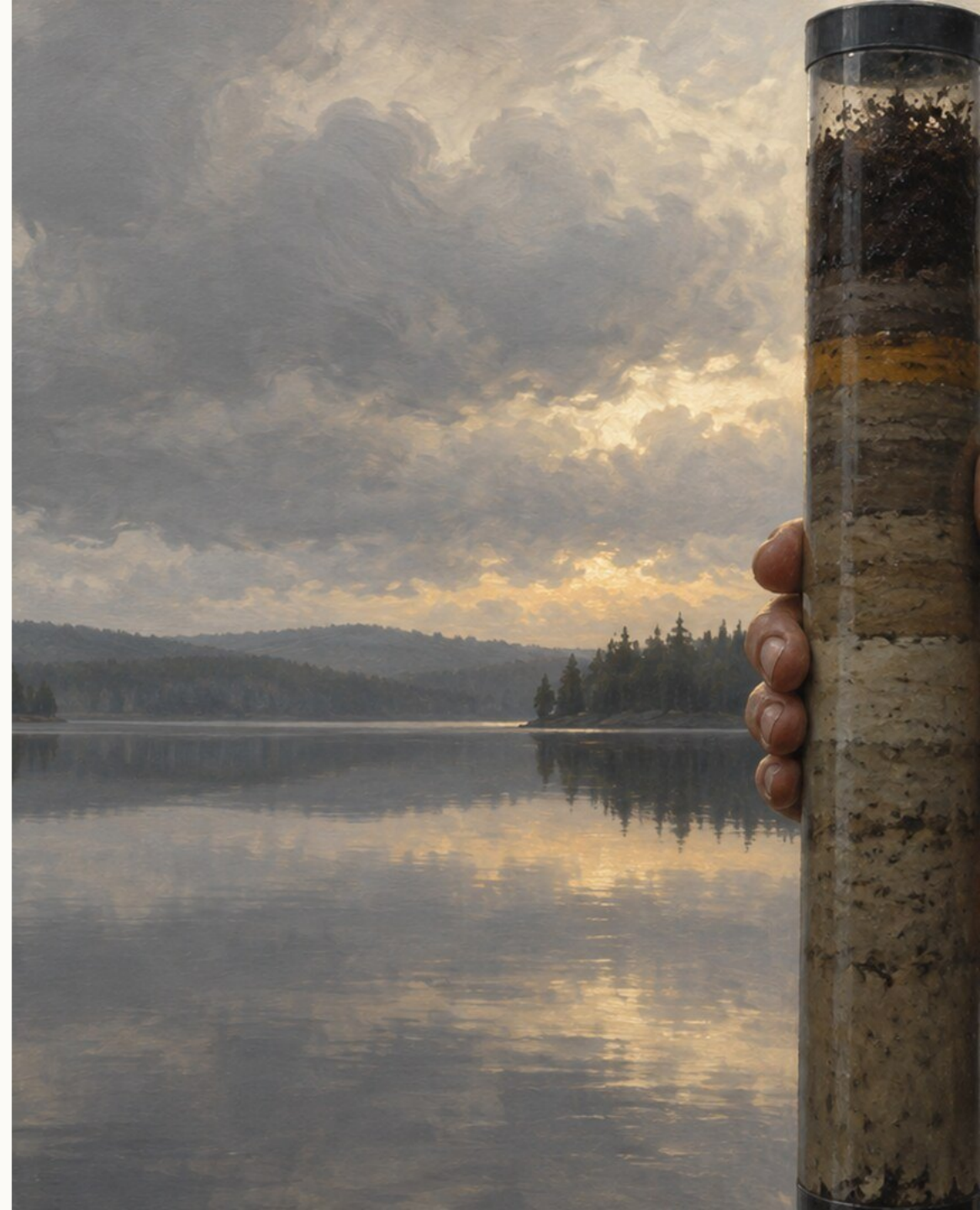
Three golden spikes within an hour of this room

- **Klonk** 1972 · Silurian–Devonian, the first ever
- **Požáry** 1984 · base of the Přídolí, Silurian
- **Velká Chuchle** 1989 · base of the Pragian



Clear in the strata, rejected in the vote

- Anthropocene: coined in 2000 by Crutzen and Stoermer
- Proposed start around 1952; candidate spike in Crawford Lake, Canada (2023)
- Rejected 12 to 4 in March 2024: an unfolding event, not an epoch
- A sharp signal is not enough; the unit has to fit the phenomenon



Our licence

Deus ex machina: let the crane lower a god, and skip the knots that do not change the story.



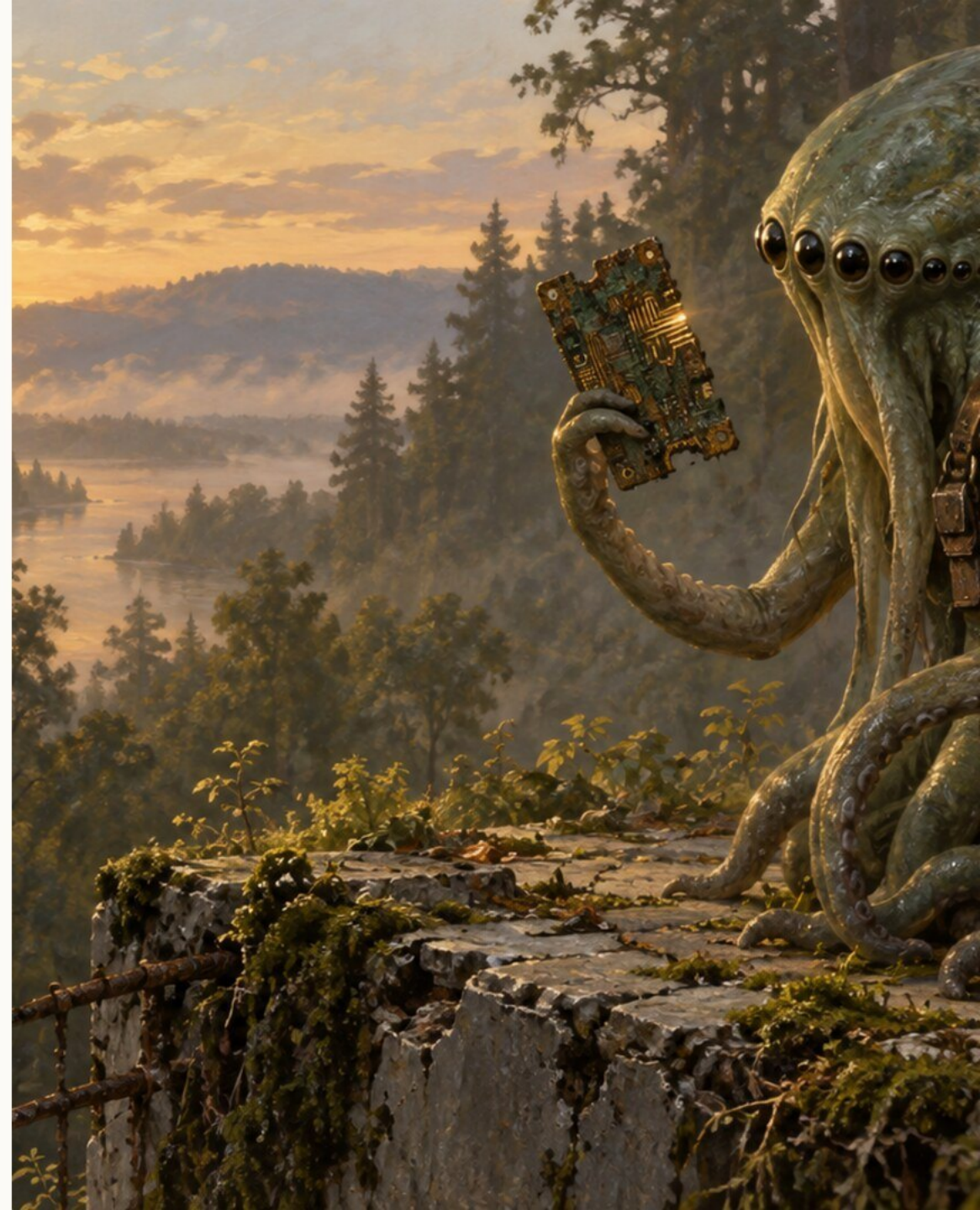
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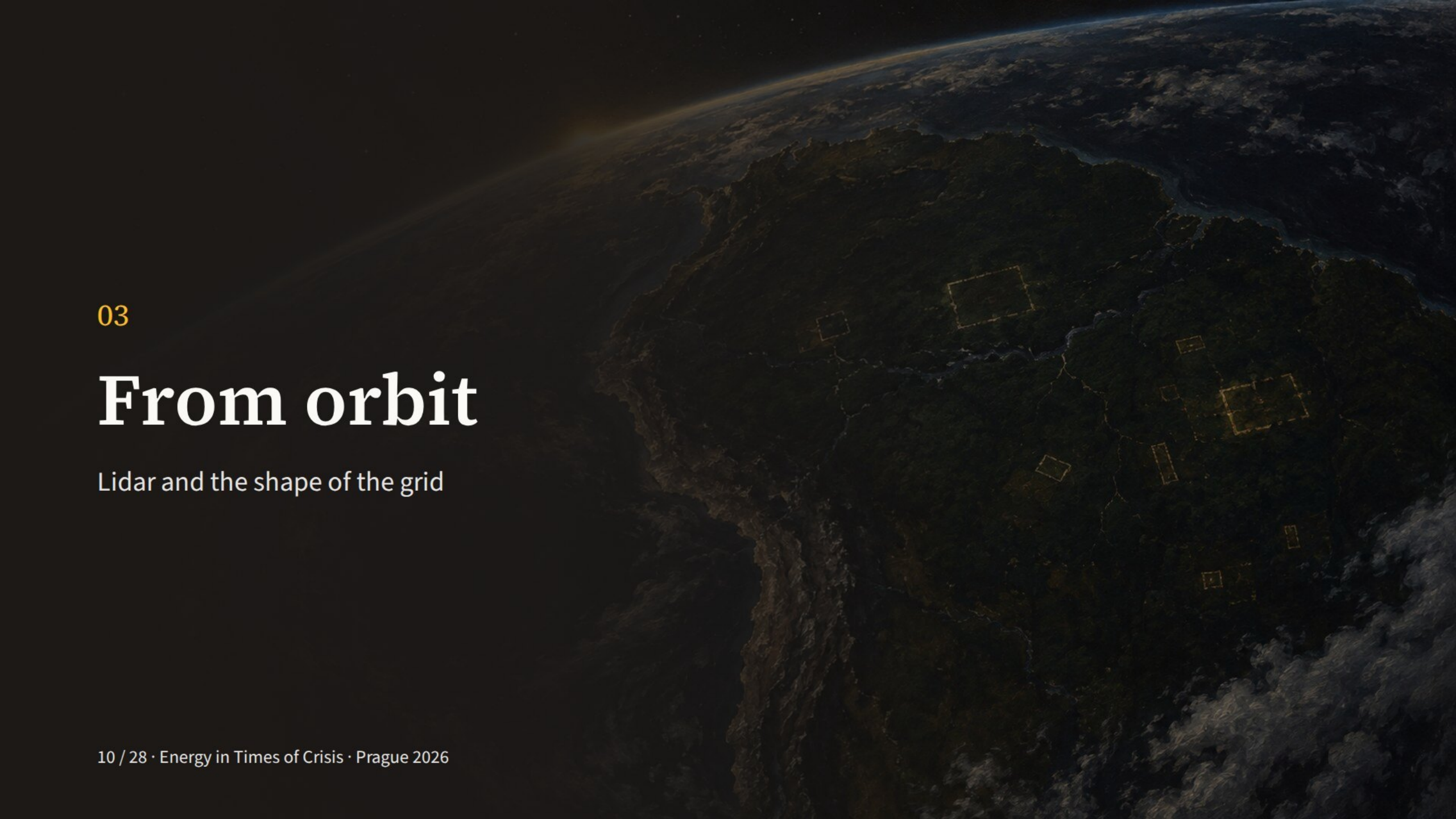
The experiment

Year 3030. No humans, no texts. Visitors with good instruments.

Reading a world without a single text

- Macaulay, *Motel of the Mysteries* (1979): the tomb that was a motel room
- Zalasiewicz: technofossils, our artefacts as future strata (2014)
- Sandia, WIPP markers (1993): we already tried to write to such visitors
- Rock, mud, ice and metal keep records that need no reader



A satellite view of Earth from space, showing a large landmass with a grid of yellow rectangular outlines overlaid on it. The grid covers a significant portion of the landmass, with some rectangles being larger than others. The background shows the curvature of the Earth and the blue of the oceans.

03

From orbit

Lidar and the shape of the grid

Lidar through the forest

- Maya lowlands: 60,000 structures under 2,144 km² of canopy (2018)
- Angkor's city grid, Casarabe's causeways: legible after a thousand years
- AI campuses: Hyperion 910 ha, Abilene 445 ha, cement by the hundred kilotonnes
- Power 1.2–5 GW each, one or two Temelíns; all that cement $\approx$ 1–3 weeks of the load
- Lidar finds the rectangles; the trench dates them and says what they were



Islands with their own fires

- 2,600 GW waited for a US grid connection in 2023; 2,060 GW in 2025, median wait 61 months
- Loads queue too: Texas from 63 to over 400 GW in eighteen months, mostly data centres
- So they bring their own power: ~100 GW of on-site gas planned, a fifth of the US fleet
- True islands are being built: a 2 GW campus in West Virginia on its own gas engines
- The alien maps every pylon and finds the largest halls making their own power



04

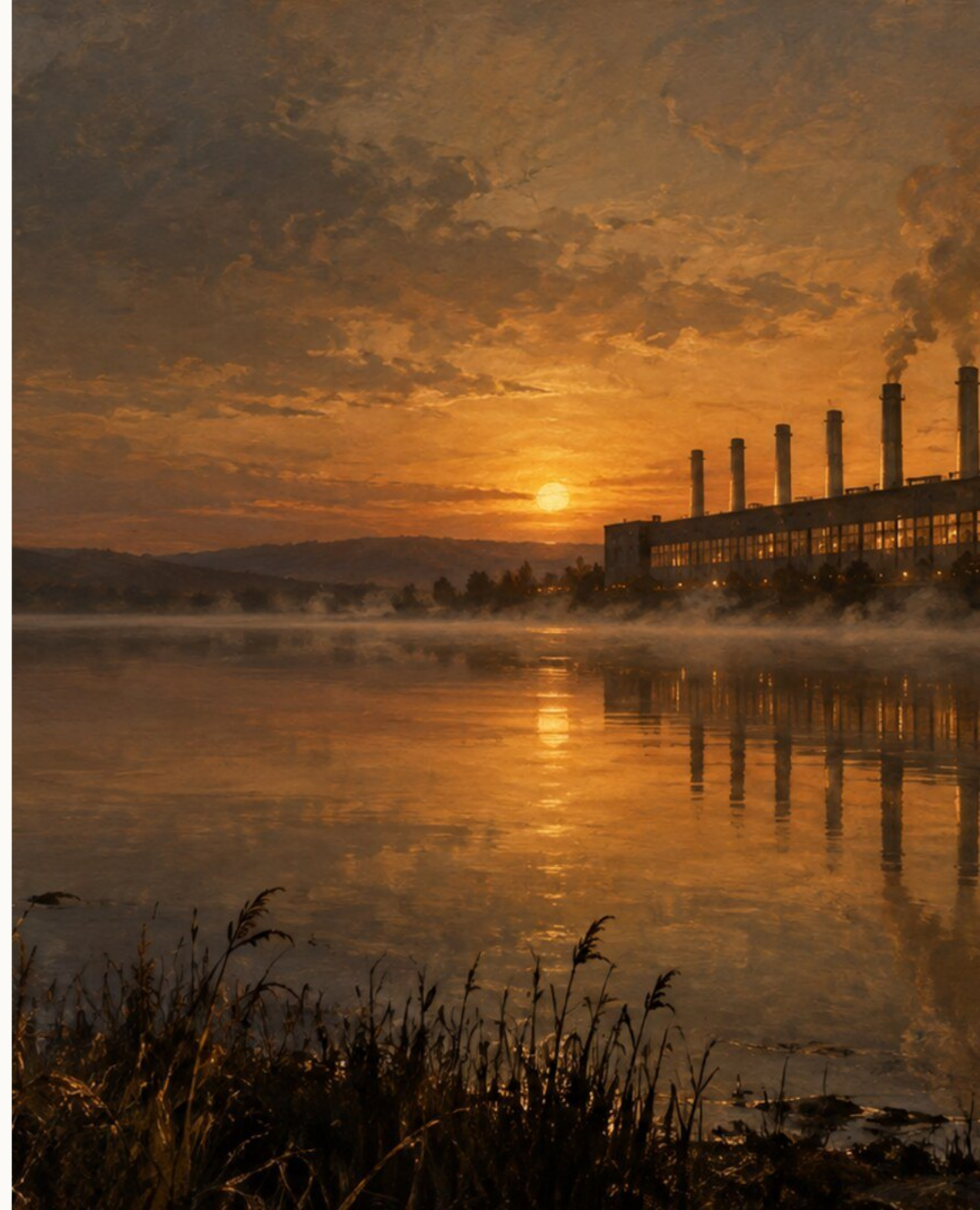
On the ground

What a lake, a well, a street and a trench say



The lakes remember the turbines

- Memphis: 35 unpermitted turbines, 15 permitted (2025); 41 next door, 1.2 GW (2026)
- Colossus 1 $\approx$ 0.4 GW; Colossus 2 $\approx$ 1.3 GW today, 2 GW planned: the largest of 2026
- Not for long: by 2028 Fairwater WI $\approx$ 3 GW, Rainier IN and Jupiter NM 2.2 GW pass it
- Coal and oil left fly-ash spheres in lake beds worldwide, rising from 1950 (Rose 2015)
- Gas leaves only soot, PAHs and a nitrogen spike; a core dates it, the fuel is inferred



Old fires kept burning

- 15 US coal plants kept from retiring since 2025: over 68 million tons of CO₂ in 2024
- Three Mile Island Unit 1 being restarted for one customer: 835 MW for twenty years
- Turbine prices forecast up 195 % by 2027; heavy turbines five to seven years away
- In the strata: the coal fly-ash layer thins later here than elsewhere



Wells and rivers

- Memphis drinks from a deep aquifer; Colossus drew 0.8 million gallons a day from it (2026)
- The Dalles, Oregon: one company, nearly 40 % of the town's water (2025)
- Santiago: a court struck a permit to draw 7.6 million litres a day
- Aragón, Spain: a campaign called „your cloud dries my river“
- A compacted aquifer stays compacted; a river's bad years read as climate, not one building



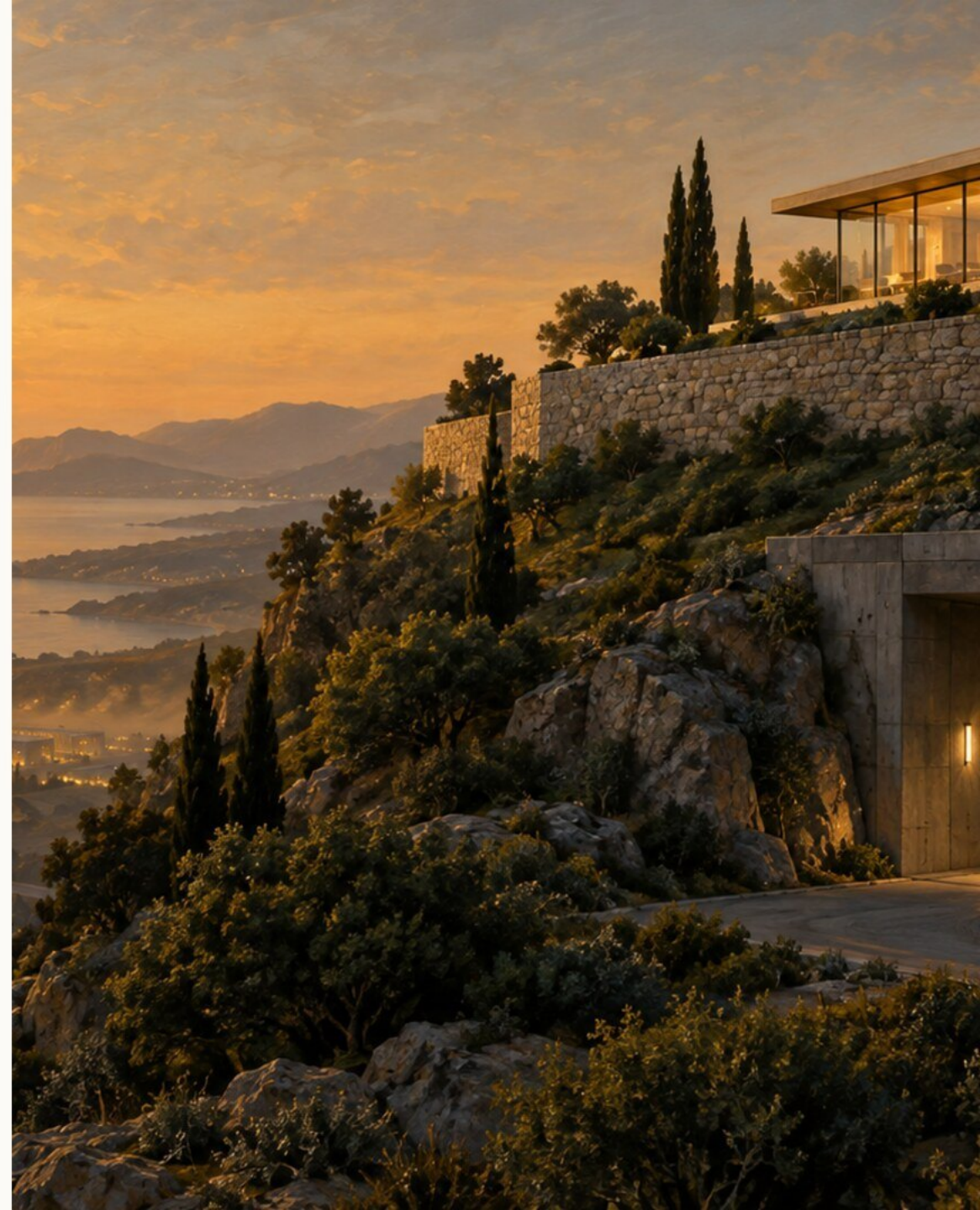
The rich electricians

- Electrical work is 45–70 % of a data centre's construction cost
- IBEW Local 26, Northern Virginia: membership doubled since 2018 to 14,700
- Median US electrician \$63,000; Texas data-centre electricians reported at \$260,000
- Houses and bones show who got richer; which trade it was, the visitors cannot tell



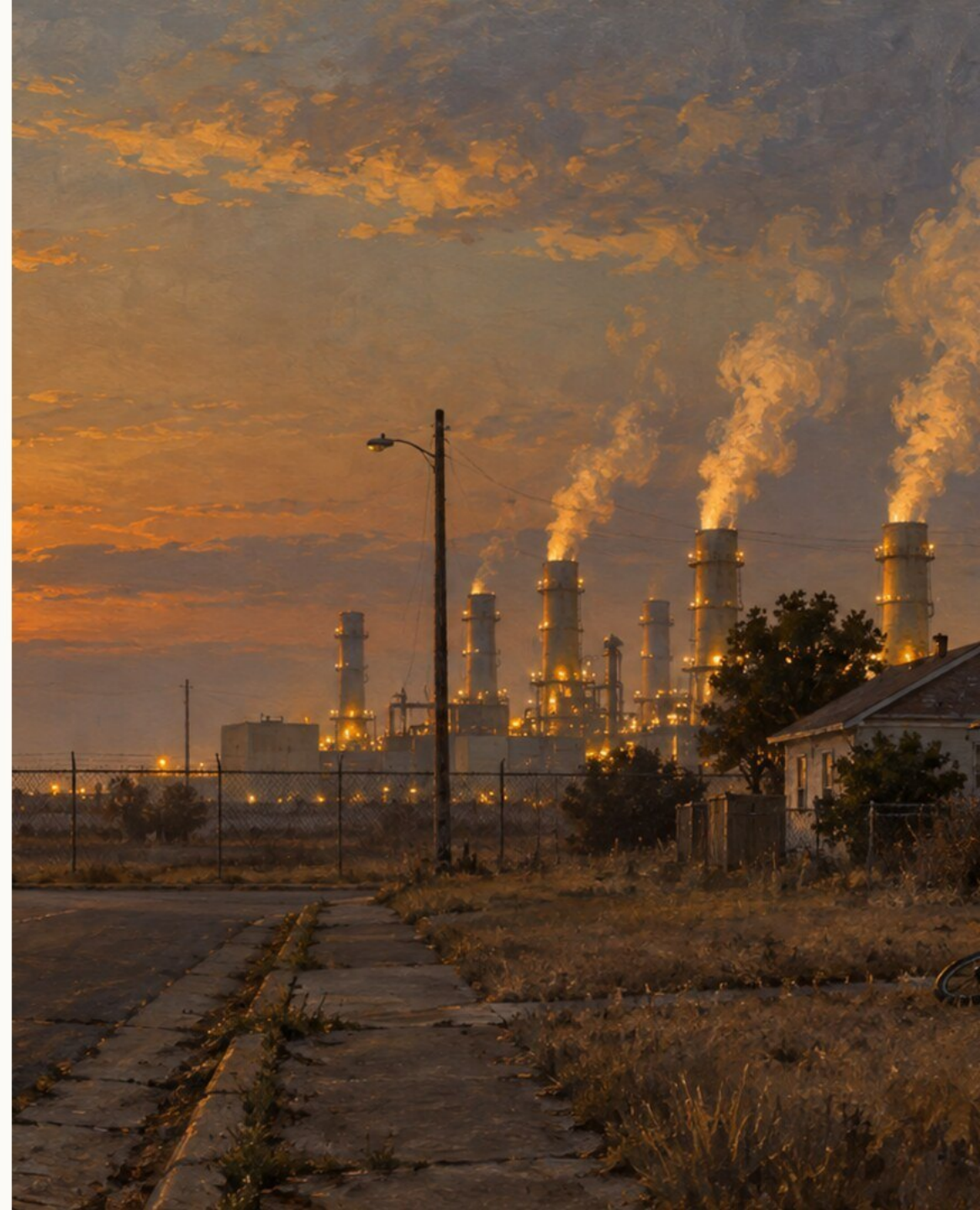
Richer than the electricians

- Meta hired one Apple researcher with a package of over \$200 million (2025)
- OpenAI staff sold \$6.6 billion of shares in one round; 75 reached the \$30 million cap
- Nvidia's Jensen Huang: about \$3 billion in 2022, about \$200 billion in 2026
- Virginia: a 9-hectare family farm assessed at \$2 million, listed at \$50 million
- For the trench: estates, walls and concrete shelters, built to last



And those left aside

- Kenya 2022: labelling violent texts for ChatGPT at \$1.32–2 an hour
- Ages 22–25 in AI-exposed jobs: employment 19 % below trend (2026)
- UK 2024: 36 % of translators, 26 % of illustrators already lost work to AI
- Boxtown, Memphis: turbines next door; US power bills up 6–29 % by 2030
- In the ground: small houses beside large ones, soot on the poor side



What the trench turns up

- Concrete pads and cooling-tower rings, the Maya platforms of the 2030s
- Backup fuel tanks and their hydrocarbon halo in the soil
- Gold that never corrodes, in flakes around the boards; racks rusted to a red stain
- And not one byte of what the machines computed



What they will know

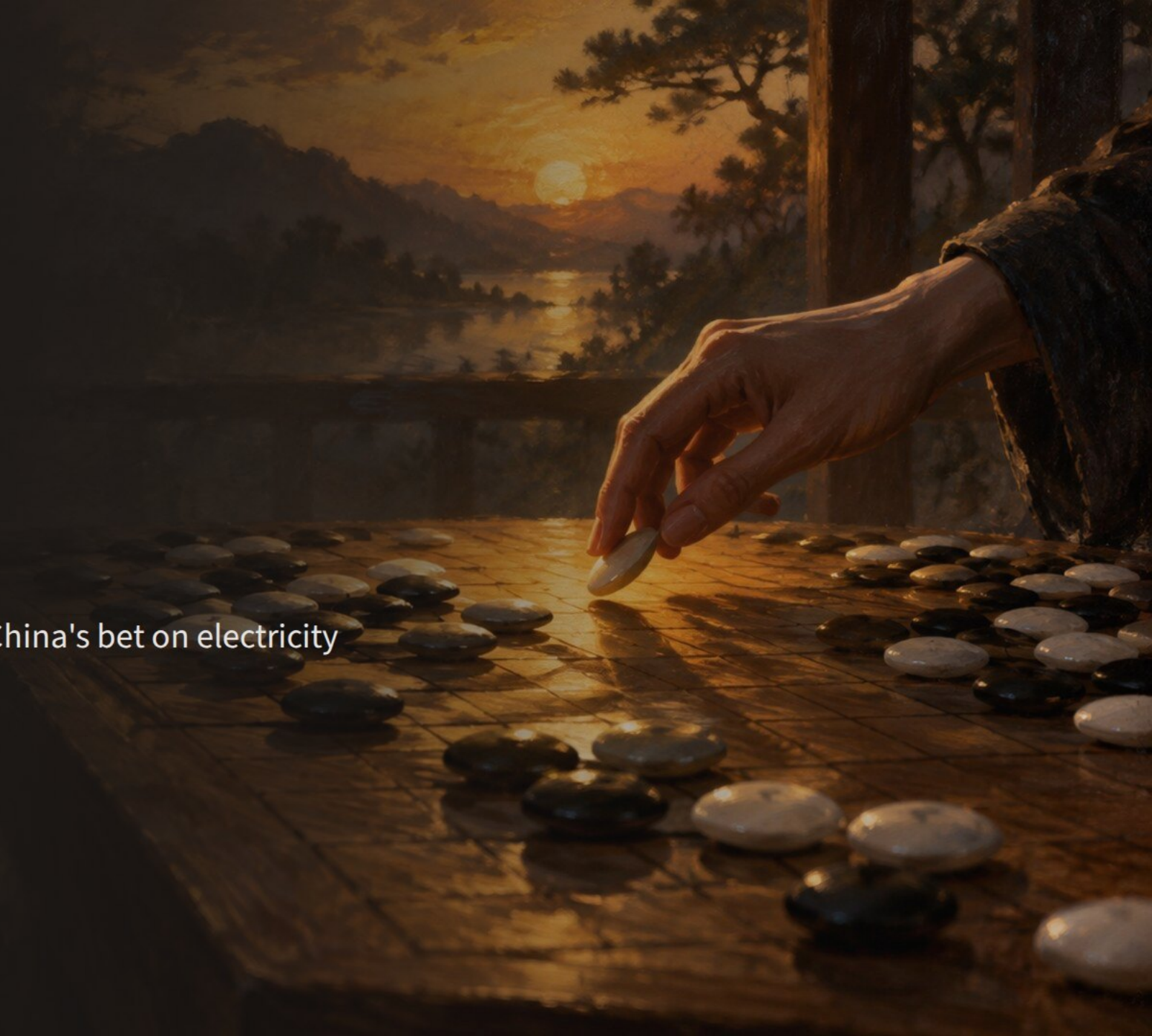
**They will know that the machines
computed, and what it cost. What
they computed, the rocks will not
say.**



05

The second experiment

Same god, same visitors. One change: China's bet on electricity pays off, and the god waits until 2080.



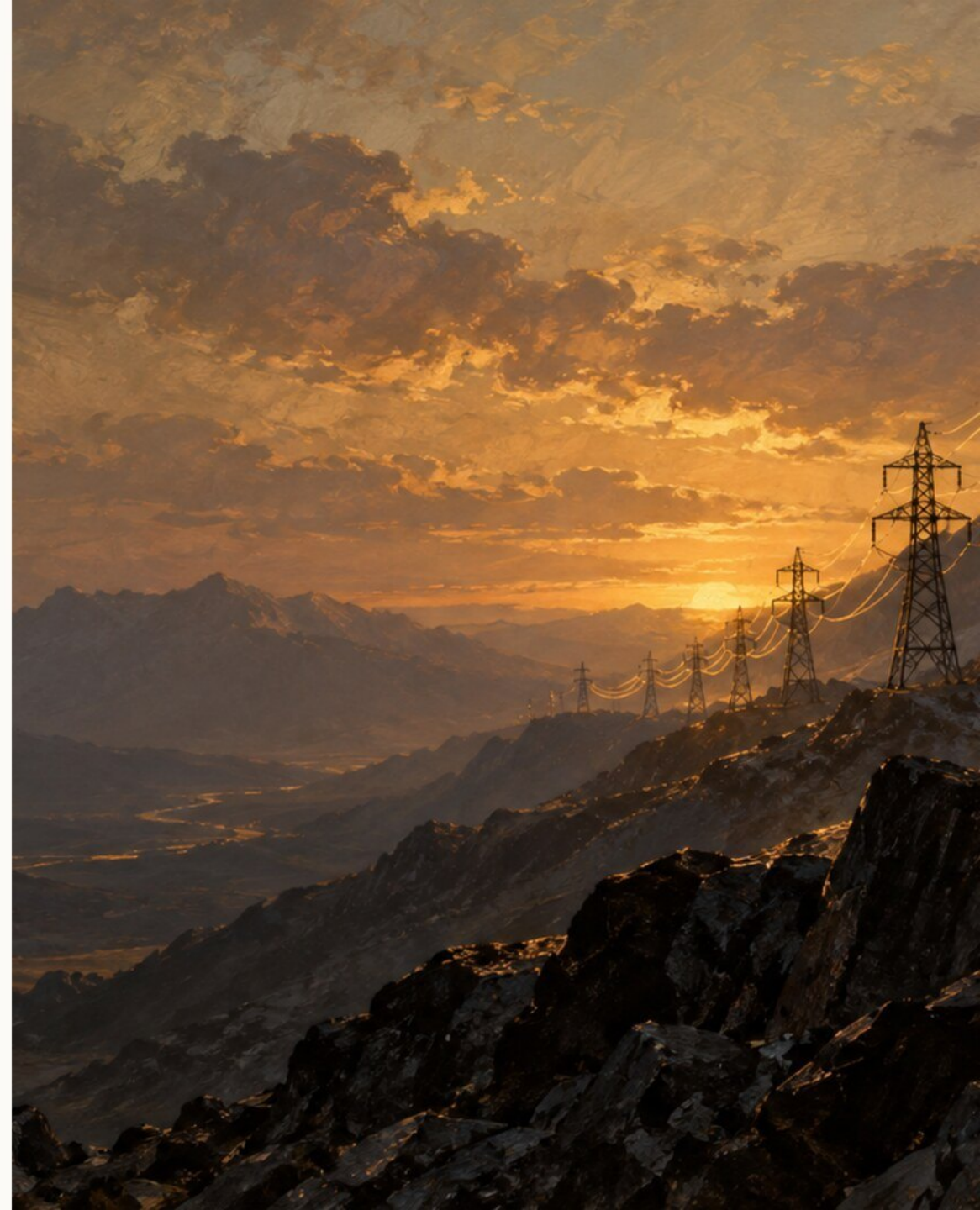
The bet: the first electrostate

- Electricity 2025: China 10,600 TWh, the US 4,400 TWh; in 2000 China had a third of the US
- 2025: 58 % of the world's new solar and 72 % of its new wind were installed in China
- 36 of the world's 73 reactors under construction; State Grid: 42 UHV projects, 370 GW
- Energy-transition investment 2025: China \$800 billion, the United States \$378 billion
- Caveats: coal still 54 % of generation; 15–30 % of western wind and solar curtailed



Assume it pays off

- Compute follows electrons: halls go where a gigawatt is a permit, not a five-year queue
- America puts gas turbines beside its halls; China moves the halls west to the solar seas
- Assumption, not forecast: by mid-century the largest halls stand by the western solar seas
- Against it today: chips, not watts, are China's limit; some western halls sit near empty
- „China is well ahead of us on energy. We are way ahead on chips.“ – Jensen Huang, 2025



Can they read a shift of power?

- Greenland copper peaks twice, a millennium apart: Rome, then Song China
- One Antarctic core reads three centres in turn: the Andes, Potosí, Broken Hill
- The shift is in the ice now: Greenland soot peaked in 1908, Everest's tripled after 1975
- Ours would read as a change of material: fuel and soot on one shore, glass on the other
- Kubuqi: a solar wall planned at 400 km; Landsat already sees it growing



The background image is a composite landscape. On the left, a calm river reflects the golden light of the setting or rising sun. To the right of the river, there is a large field of solar panels. In the distance, a series of high-voltage power lines with pylons stretch across the horizon. The sky is filled with soft, golden clouds, and the sun is a bright orb on the horizon line.

What they will read

They will date the shift to the decade and trace the goods to their workshops. Who owned them, the rocks will not say.

Where this comes from

Essays on AI

Czech essays for the curious lay reader – mila.guide/psani

Od mýtů k megawattům

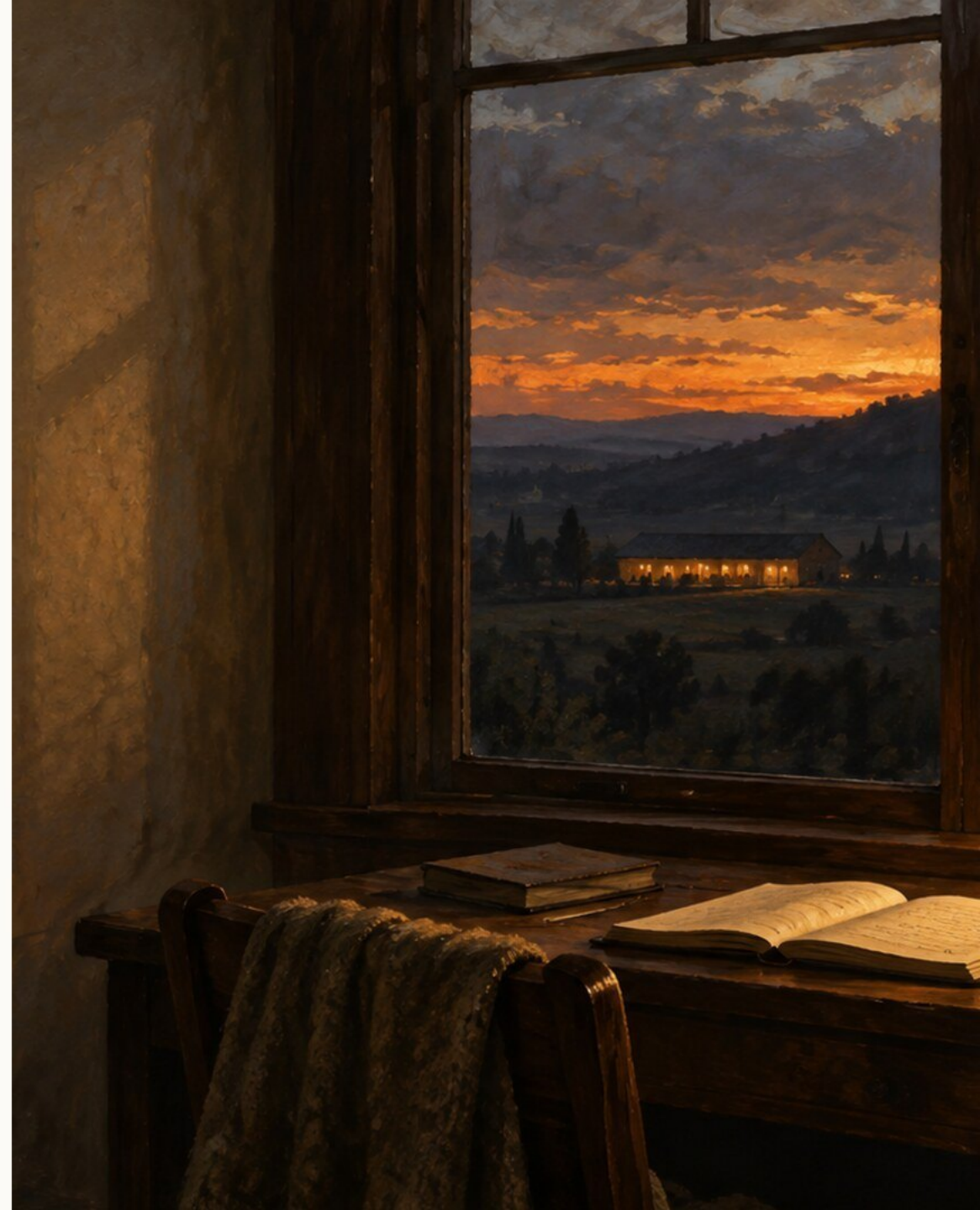
A book on wind and wind power – vitr.mila.guide

Energetika a AI

A book in preparation – the source of these figures

Free books

Earlier books, free to download – vydavatelstvi.mila.guide



Thank you

Essay „AI a elektřina“ – AI srozumitelně (in Czech)

aisrozumitelne.mila.guide

