



KING ETHELRED'S COLLEGE OF ENGINEERING

Established in 978 (ish)

DEPARTMENT OF FIRE, ENERGY
AND RETROSPECTIVE SAFETY ENGINEERING

THE GIANT FUSION REACTOR IN THE SKY: TERMS AND CONDITIONS APPLY

*On the claim that all electrical loads will eventually transition to solar,
and the discovery that they did so some time ago*



A departmental research thesis prepared under the College Fellowship Ordinance
(Combustion and Consequences) 1667

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*Fortitudine.
Ingenio.
Tea and biscuits.*



ABSTRACT

In September 2026 the proprietor of an electric-car company, commenting on a weekend's statistics from his company's largest charging station, stated that all electrical loads will eventually transition to solar and storage, because the giant fusion reactor in the sky is free. The College has examined the claim with the seriousness it deserves, that is, by taking it literally, checking the dates and applying it to everything.

The finding is that the claim is correct, and that the transition took place rather earlier than the proprietor supposes. Coal is Carboniferous sunlight with a delivery time of about three hundred million years. Petrol is Mesozoic plankton that spent its afternoons photosynthesising. Wind is sunlight that has warmed some air, hydroelectricity is sunlight that has lifted some water, and a Fellow is sunlight that has passed through a sandwich. The only loads on the national system not ultimately supplied by the reactor in the sky are nuclear fission, which burns the ash of a different and much larger star, tidal power, which belongs to the Moon, and geothermal heat, about half of which is radioactive decay and the rest the residual warmth of the planet's construction.

The thesis reviews the reactor (output, delivery time, remaining life and invoicing arrangements), the historical deliveries stored by geology, the exceptions, the question of storage, and the Lost Hills car park in California whose Labor Day chart prompted the remark. It concludes that the reactor is indeed free and that the delivery charge is a planet. Storage has until now been provided by the Carboniferous, at a poor round-trip efficiency but on excellent terms. The proprietor's contribution to the argument is a proposal to shorten the delivery time from three hundred million years to about eight minutes, which the Department regards as a reasonable engineering objective, and one that every plant has pursued since the first.

Research status. This is a fictional King Ethelred's College thesis. The solar, geological, nuclear and Lost Hills figures are real and referenced. The redrawn Labor Day chart in Chapter 6 was read off the published image and is approximate. The Senior Common Room solar kettle trial in Chapter 8 is synthetic and constructed to be plausible. The Bursar's opinion of the electricity bill is real and has been softened.

Keywords: solar energy; fossil fuels; photosynthesis; storage; Carboniferous; fusion; supercharging; Lost Hills; energy accounting; terms and conditions.

ACKNOWLEDGEMENTS

The author thanks the proprietor for the remark, without which the Department would have had to find its own reason to write about the Carboniferous this term, and Tesla Charging for publishing a day's operating data from the Lost Hills site in enough detail for the College to redraw it, argue about it and put it in a thesis.

The Department of Improbable Systems, Load Forecasting and Domestic Thermodynamics reviewed Chapter 6 and confirmed that the morning charging peak at Lost Hills is, in its professional opinion, 'a kettle problem with wheels'. The Department of Civil Engineering lent a pyranometer after being assured that no bridge work would be delayed, and later asked why it had been returned with a teabag in it.

Mrs Enid Partridge of the Senior Common Room agreed to the solar kettle trial in Chapter 8 on the strict condition that a conventional kettle be kept in reserve. It was used. The Department records that the reserve kettle was itself solar powered, by way of the Carboniferous, and that Mrs Partridge said that this was not the point.

The Bursar is thanked for his question, put at the College Finance Committee, as to whether the reactor in the sky would be sending an invoice, and for his observation, when told it would not, that in his experience that is when the invoices are largest.

Gerald was asked to locate the College's solar panel. He has located a panel. The Department is not yet satisfied that it is the College's.

Statement on nomenclature. 'The reactor' means the Sun. 'Free' is used in the proprietor's sense, meaning that no invoice is raised for the fuel, and not in the Bursar's sense, which does not exist. 'Solar' is used in the College's sense, meaning everything except uranium, the Moon and the middle of the Earth.

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NOMENCLATURE

Symbol	Meaning
P_{sun}	solar power arriving at the top of the atmosphere, about 173,000 TW
P_{us}	humanity's total primary energy use averaged over a year, a little under 20 TW
t_d	delivery time: the interval between sunlight and socket for a given route, s to Myr
η_{ps}	efficiency of photosynthesis in storing sunlight as biomass, typically 1 to 2 per cent
η_{pv}	efficiency of a commercial photovoltaic module, about 20 per cent
η_{rt}	round-trip efficiency of a storage system; about 90 per cent for a lithium battery, rather less for a coal measure
Myr	a million years; the unit in which the Department's older suppliers quote delivery
TW	a terawatt, a million megawatts; humanity is about twenty of them
the reactor	the Sun: a gravitationally confined hydrogen fusion plant of 3.8×10^{26} W, 150 million km from the Bursar
the Carboniferous	the geological period from about 359 to 299 million years ago, during which most coal was laid down
Oasis	the Lost Hills, California, supercharging site: 168 stalls, 11 MW of solar, 39 MWh of batteries
the proprietor	the author of the remark under examination; not otherwise named, at the Bursar's request
T&Cs	terms and conditions: the part of any free offer that the Department reads first

1 INTRODUCTION

1.1 The remark

On 11 September 2026 the charging division of an electric-car company published a day's operating data from its largest station, at Lost Hills in California. The publication comprised a chart of solar generation, battery flow, grid draw and cars charging across a Saturday of the Labor Day weekend, an American holiday whose spelling the College leaves to its owners, with the note that 6,038 charging sessions had taken place over four days across 164 stalls, that the Monday had seen 11.2 sessions per stall, and that nobody had waited. The company's proprietor added that the peak had been 116 cars plugged in at once, drawing 11.4 MW, and then the sentence that brought the matter to the College: all electrical loads will eventually transition to solar and storage, because the giant fusion reactor in the sky is free.

The Department of Fire, Energy and Retrospective Safety Engineering was founded in 1667, the year after London demonstrated the consequences of energy stored in timber, and has taken a professional interest in where energy comes from ever since. It found the remark accurate, and it found that the accuracy extends a good deal further than the proprietor appears to have intended.

1.2 The College position

The College does not dispute the sentence. It disputes the tense. All electrical loads have already transitioned to solar, and did so before there were electrical loads, because with three exceptions examined in Chapter 4 there is nothing else on offer. The coal in the boiler, the petrol in the tank, the wind on the turbine, the water in the dam and the wood in the grate are all sunlight, differing only in how long ago it arrived and what it has been doing since. The proprietor's proposal is therefore not a transition but a change of delivery time, from something like three hundred million years to something like eight minutes, and the Department is content to examine it on those terms.

1.3 Method

The Department applies its usual method to a free offer. Read the terms and conditions. Find out who is paying for delivery. Ask what happens at night. Check whether the storage is included. Establish the warranty. Put the kettle on, and note where the kettle's electricity came from, which in this case turns out to be the point.

College hypothesis. Everything that has ever been burnt, eaten, blown or dropped from a height to make power was sunlight first. The reactor in the sky is not a future supplier. It is the only supplier we have ever had, and it has never once sent a bill, which the Bursar regards as suspicious.

2 THE REACTOR

2.1 Specification

The reactor is a sphere of hydrogen and helium about 1.4 million kilometres across, fusing hydrogen into helium at its core and converting roughly four million tonnes of matter into energy every second. Its output is about 3.8×10^{26} W, of which the Earth, being small and 150 million kilometres away, intercepts about 173,000 TW. Humanity's entire primary energy use, averaged over a year, is a little under 20 TW. The reactor therefore delivers to the planet, every hour, about as much energy as the planet's inhabitants use in a year, and has done so without interruption for four and a half billion years.

It is not, in the ordinary sense, a well-designed plant. It is confined by its own gravity, which no regulator would accept; it cannot be turned down; it is half of every day on the wrong side of the planet; and its output at the surface depends on cloud, latitude, season and the angle of the roof. Against this, it has a remaining service life of about five billion years, requires no fuel deliveries, employs no staff and has never been the subject of a public inquiry. The Department has assessed many plants and has not found another with this profile.

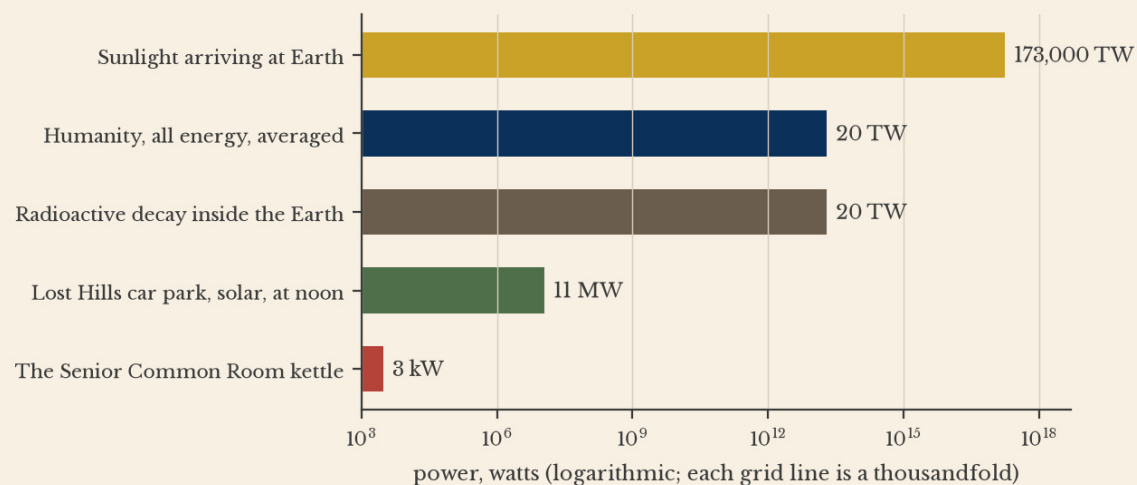


Figure 2.1 - The reactor's delivery against what is drawn from it. Each grid line is a thousandfold. The Senior Common Room kettle is included for scale and because it was nearest.

2.2 Delivery

Light leaves the reactor's surface and arrives at the car park eight minutes and twenty seconds later. This is the shortest delivery time of any energy route available to the Department, and the proprietor's argument, stripped of its enthusiasm, is simply that eight minutes is better than three hundred million years. The Department agrees, with the reservation that the eight-minute route does not include storage and the three-hundred-million-year route does. Chapter 5 returns to this.

2.3 Invoicing

The reactor raises no invoice. The Bursar has asked the Department to confirm this in writing and it does so here. The reactor also provides no connection, no conversion, no storage, no transmission, no land and no roof, and it is in these items, the Department observes, that the terms and conditions of the free offer are to be found. They are considered in Chapter 9. For the present it is enough to say that the fuel is free in exactly the sense that rain is free, and that the College nevertheless pays a water bill.

3 DELIVERIES ALREADY MADE

3.1 The ledger

The reactor has been delivering for four and a half billion years, and for the last few hundred million a portion of the delivery has been signed for by plants, converted to carbon compounds and put into storage by geology. Humanity found the storage in the eighteenth century and has been drawing on it since. The Department's ledger of the principal deliveries is at Table 3.1.

Fuel	What it is	When the sunlight arrived	Delivery time
Coal	Carboniferous forests, buried in extensive waterlogged basins	c. 359 to 299 million years ago	c. 300 Myr
Oil and gas	Marine plankton, buried, cooked and pressed, largely in the Mesozoic	c. 250 to 65 million years ago	c. 100 to 200 Myr
Peat	Bog vegetation, not yet coal, waiting	the last few thousand years	millennia
Firewood	A tree	the last few decades	decades
Food	Crops and the things that eat crops	this year	months
Wind	Air warmed unevenly by sunlight, moving to even itself out	this week	days
Hydroelectricity	Water lifted by sunlight, dropped by the Department of Civil Engineering	this month	weeks
Photovoltaic	The delivery itself, intercepted on a roof	eight minutes ago	8 min 20 s

Table 3.1 - The Department's ledger of solar deliveries by route. Every row is the same supplier. Only the paperwork differs.

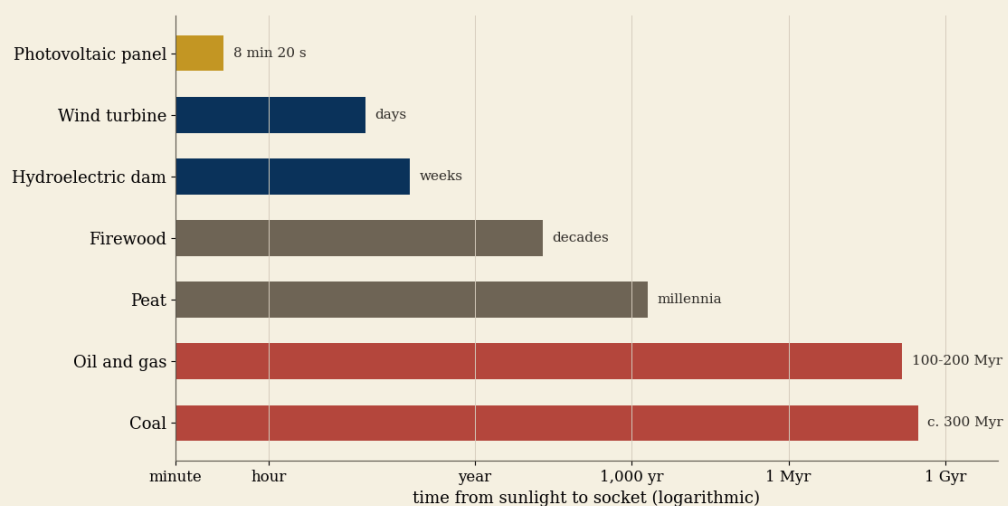


Figure 3.1 - Time from sunlight to socket, by route. The scale is logarithmic because the alternative was a chart nineteen kilometres wide.

3.2 Coal

Coal is the clearest case. During the Carboniferous period, roughly 359 to 299 million years ago, vast forests grew in extensive waterlogged tropical basins and were buried faster than they could decay. The fungi were formerly blamed, but have since produced documentation. Pressure and time turned peat to lignite and lignite to coal, and the sunlight captured by those forests lay in the ground until Britain began to dig it out in earnest in the eighteenth century. The Industrial Revolution was, in the Department's accounting, the discovery of a very old battery; the two centuries since have been its discharge.

3.3 Oil

Oil and natural gas are the same story at sea. Microscopic marine organisms, mostly plankton, photosynthesised, died, sank, were buried in fine sediment and were cooked slowly at depth into hydrocarbons, largely during the age of the dinosaurs, though the dinosaurs themselves contributed almost nothing and the Department wishes the petrol companies would stop implying otherwise. A litre of petrol is therefore Jurassic and Cretaceous sunlight, concentrated by pressure, delivered by tanker, and consumed in a morning.

3.4 The point

A gentleman knows all of this, and the College would not ordinarily set it down. It does so because the remark under examination treats solar power as a destination, and the ledger shows it to be the origin. The proprietor is not proposing to change the supplier. He is proposing to collect the delivery at the door instead of digging it up three hundred million years later, and the Department's only question is what he intends to do about the night.

4 THE EXCEPTIONS

Symmetry requires the Department to say what is not solar. There are three items, and the College is satisfied that the list is complete.

4.1 Nuclear fission

Uranium and thorium were not made in the Sun. They were made by the rapid capture of neutrons in the collisions of neutron stars and in the explosions of very large stars, long before the Sun existed, and they arrived in the material from which the Earth formed. A nuclear power station therefore burns the ash of a different reactor, one that blew up, which the Department feels the industry could make more of in its publicity.

4.2 Tidal power

The tides are raised chiefly by the Moon, and the energy taken from them is drawn from the Earth's rotation and the Moon's orbit, which slow by an amount the Department has been asked not to describe as 'negligible' in the presence of the Department of Astrophysics. Tidal power is the only route on the list that sends its bill to a different body entirely, and the Moon has not so far raised one.

4.3 Geothermal heat

The Earth leaks something over 40 TW of heat from its interior. Roughly half is the decay of radioactive elements, which returns us to the exploded star of Section 4.1, and the rest is the residual warmth of the planet's assembly four and a half billion years ago, that is, gravitational energy released when a great many rocks fell together. Neither is solar. Both are, the Department notes, older than the offer under examination by a margin that makes the Carboniferous look recent.

Source	Ultimately from	Solar?	Departmental note
Coal, oil, gas, peat, wood, food	Photosynthesis	Yes	Stored sunlight; see Table 3.1
Wind, wave, hydro	Sunlight moving air and water	Yes	Sunlight with an intermediary
Photovoltaic and solar thermal	Sunlight	Yes	Sunlight without one
Nuclear fission	Neutron-star collisions and supernovae	No	A different star, deceased
Geothermal	Radioactive decay and the heat of formation	No	Half the same different star; half falling rocks
Tidal	The Moon's orbit and the Earth's spin	No	The only route with an external creditor

Table 4.1 - Every route to the socket, and where it starts. The proprietor's sentence is true of the first three rows and was, the Department suspects, meant to be.

Departmental observation. The nuclear industry has spent seventy years explaining that it is safe, and never once mentioned that its fuel was forged in the collision of two dead stars. The Department cannot help feeling that it has been advised by the wrong people.

5 STORAGE, OR THE CARBONIFEROUS AS A BATTERY

5.1 Two batteries

The proprietor's sentence has two halves, and the second, storage, is the one that has kept the reactor's customers digging for two centuries. A photovoltaic panel supplies power when the Sun is up and nothing when it is not, and a civilisation that wants tea at nine in the evening must put something between the panel and the kettle. Until recently the something was geology.

Consider the coal measures as a battery. They were charged over tens of millions of years at the rate at which swamp forests could grow and be buried, which is slow; they were discharged over about two hundred years at the rate at which a steam-powered civilisation could burn them, which is not. The round-trip efficiency is dreadful: photosynthesis captures perhaps one or two per cent of the sunlight that falls on a leaf, most of the plant rots before burial, and most of what is buried never becomes coal. Against this, the battery required no manufacture, no maintenance and no replacement, and held its charge for three hundred million years without measurable loss, which is a warranty the Department has not seen matched.

The Lost Hills Megapacks are the other kind. They hold 39 MWh, charge from an 11 MW array in a few hours of sunshine, return about ninety per cent of what they were given, and do it again the next day. The comparison is at Figure 5.1, and the Department draws from it the conclusion that the proprietor has not changed the supplier or the principle. He has changed the cycle time, from three hundred million years to one afternoon, and improved the round-trip efficiency by a factor the Department declines to compute in case the Bursar asks it to invest.

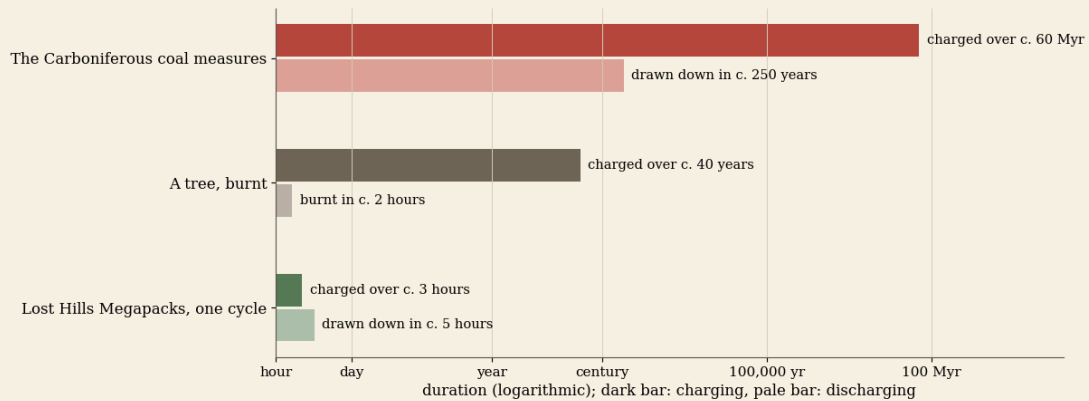


Figure 5.1 - Two batteries. The Carboniferous was charged slowly and discharged quickly; the Megapack is charged and discharged daily. The tree is included as an intermediate case and out of respect.

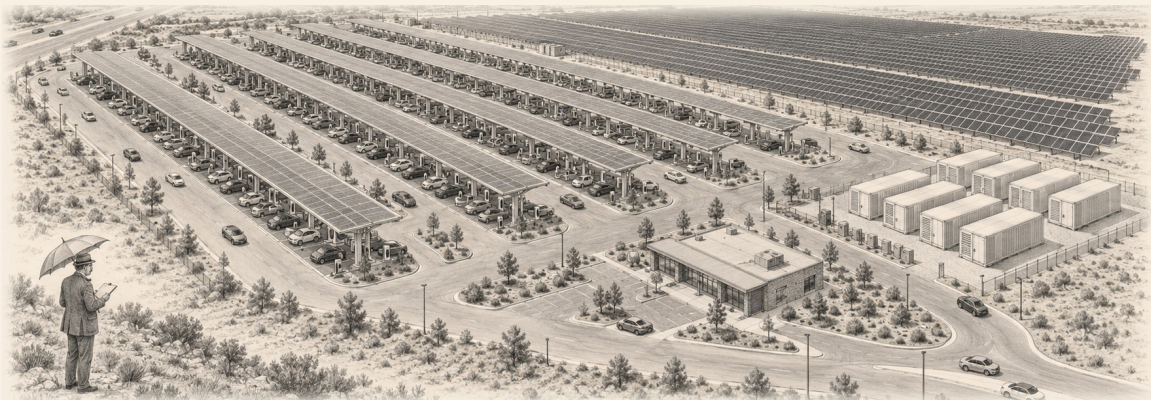
5.2 The warranty

The Department is obliged to note one term in the geological battery's favour that the lithium one cannot match. The coal measures have never needed replacing, and the sunlight they hold is exactly as usable now as it was when the forests fell. A lithium battery is warranted for a decade or two. The Department does not regard this as an argument for coal, whose other terms and conditions are set out in the Department's founding statute of 1667 and in the atmosphere. It regards it as a reminder that the reactor's old storage contractor was, whatever else may be said of it, reliable.

6 THE CAR PARK AT LOST HILLS

6.1 The installation

The site that prompted the remark is a charging station at Lost Hills, California, on the road between Los Angeles and San Francisco, along which much of the state drives on holiday weekends. It was designed for 168 charging stalls; Tesla's current listing and the Labor Day data record 164 in service. The site has 11 MW of solar panels across ground and canopies over about thirty acres, with ten battery units holding 39 MWh. It opened in stages during 2025 and is designed to run without the grid. The Department notes this because the published chart shows a modest grid contribution in the early morning, and the Department reports what the chart shows.



6.2 The weekend

Over the four days of the Labor Day weekend the site recorded 6,038 charging sessions across the 164 stalls in service, with 11.2 sessions per stall on the Monday and, in the operator's phrase, zero waiters. The peak came with 116 cars plugged in at once drawing 11.4 MW, that is, more than the array could supply at noon, the balance coming from the batteries and, briefly, the grid. The published chart for the Saturday is redrawn at Figure 6.2 in the College's colours; the values were read from the image and are approximate, and the shape is the point.

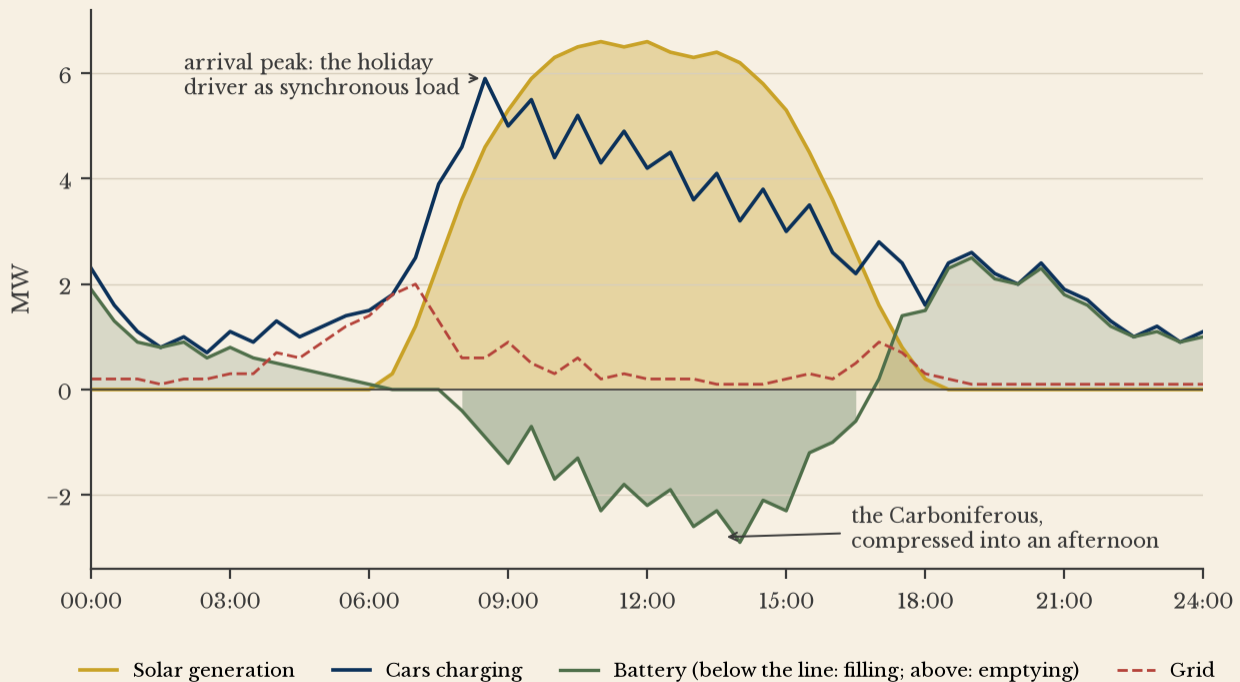


Figure 6.2 - The Lost Hills day, 5 September 2026, redrawn from the operator's published chart. Values read off the image at half-hour intervals; treat the numbers as indicative and the shape as reliable. Below the line the battery is filling; above it, emptying.

6.3 What the chart shows

The gold hump is the reactor, arriving at about seven in the morning, peaking a little after noon at some six and a half megawatts and gone by half past six. The navy line is the cars, and the Department of Improbable Systems, which reviewed the figure, points out that it peaks not at noon but at about nine in the morning, when the holiday traffic arrives, and again in the evening, when it comes back; on neither occasion was the reactor consulted. This is the kettle problem with wheels: a population that does the same thing at the same time, and a supplier on a different schedule. Between the two sits the green area. Below the line, from late morning to mid afternoon, the batteries are filling from the surplus. Above it, in the small hours and again after dusk, they are giving it back.

The Department wishes to draw the proprietor's attention, and the Bursar's, to that green area, because it is the whole of Chapter 5 in one picture. Sunlight arrives when the reactor chooses; it is used when the customer chooses; and something must hold it in between. On this Saturday the something was ten steel boxes. For the previous three hundred million years it was a swamp.

Departmental finding. The Lost Hills chart is the Carboniferous compressed into an afternoon: sunlight in, sunlight stored, sunlight out at a time of the customer's choosing. The difference is that the operator's battery was manufactured, and the other one grew.

7 THE PROPRIETOR'S SENTENCE, PARSED

The Department has taken the sentence apart in the manner of the College's Nomenclature Committee and reports on each piece.

Phrase	Departmental reading	Verdict
All electrical loads	Every socket, kettle, car and Fellow	Accepted; the Fellows have been told
will eventually	At some future date	Wrong tense; see Chapter 3
transition to	Change supplier	No change of supplier is available; see Table 4.1
solar	The reactor, collected at the door rather than dug up	Accepted, with the delivery time noted
+ storage	Something between the panel and the night	The crux; formerly a swamp
The giant fusion reactor in the sky	The Sun	Accepted; the Department prefers "the reactor"
is free	Raises no invoice for fuel	True; terms and conditions apply; see Chapter 9

Table 7.1 - The sentence, phrase by phrase. It survives the examination better than most sentences of its length, and the Department has examined more of them than it cares to count.

The Department's amended version, offered without charge, reads: all electrical loads transitioned to solar some hundreds of millions of years ago; what is proposed is to shorten the delivery time to eight minutes and replace the swamp with a battery; the reactor is free and everything else is not. It accepts that this is less quotable.

8 THE SENIOR COMMON ROOM TRIAL

8.1 Design

To examine the eight-minute route at a scale the Bursar would approve, a synthetic trial was constructed. A photovoltaic panel of two square metres was placed on the roof of the Senior Common Room and connected, through a small battery, to a kettle. The object was a pot of tea at the customary hour of four in the afternoon, in Upper Piddlington, in September, from the reactor alone. Mrs Partridge attended with the reserve kettle and an expression.

8.2 Results

The panel delivered a little under 300 W at noon under clear sky and a good deal less after two o'clock, when the weather did what the weather does. The battery had accumulated enough by half past three to bring 0.3 litres to the boil, which it did at 16:20, twenty minutes late, to a round of applause the Department has recorded as 'partial'. A second cup was not available until 16:55. The reserve kettle was used at 16:22 by a Fellow who said he could not wait, and who was reminded that its electricity had also come from the reactor, by way of the Carboniferous and a power station in the Midlands. He said that this was very interesting and drank the tea.

The Department draws two conclusions. First, the eight-minute route works, in England, in September, for one cup, with patience. Second, the customer will not wait, and the storage must therefore be sized for the customer and not for the reactor, which is the lesson of Lost Hills, of the Carboniferous, and of every afternoon in the Senior Common Room since 978 (ish).

8.3 Latitude

The trial also established, at some cost to morale, that Lost Hills receives roughly twice the annual sunlight per square metre that Upper Piddlington does. The Department has written to the reactor about this and has been referred to the terms and conditions, of which latitude is the first.

9 TERMS AND CONDITIONS

The reactor is free. The Department has read the small print and sets it out for the proprietor and the Bursar, who asked.

Term	Condition
Fuel	Free, in perpetuity, no invoice. The Bursar has asked twice.
Delivery	Eight minutes, to the top of the atmosphere. Thereafter subject to cloud.
Hours of business	Daylight only. Roughly half the time, less in winter, less again in Upper Piddlington.
Collection	Customer to provide panels, land or roof. Lost Hills: thirty acres for 11 MW.
Storage	Not included. Formerly provided by geology at no charge and a poor efficiency; now by the customer at a good efficiency and a price.
Latitude	Delivery varies with the customer's position on the planet. No appeal.
Warranty	About five billion years, after which the reactor expands and the matter becomes academic.
Alternative suppliers	Uranium (a dead star), the Moon (tides), the Earth's interior (decay and falling rocks). See Chapter 4.

Table 9.1 - The terms and conditions of the free reactor. The Bursar has initialled each line.

College doctrine. The reactor is free at the point of generation, like rain. Everything between the reactor and the kettle is engineering, and engineering has never been free, which is why the College has a Bursar and the reactor does not.

10 CONCLUSIONS

- The Sun delivers about 173,000 TW to the Earth, against a human draw of a little under 20 TW. It has done so for four and a half billion years and has never raised an invoice for the fuel.
- Coal, oil, gas, peat, wood, food, wind and falling water are all sunlight, differing only in delivery time, which runs from eight minutes for a photovoltaic panel to about three hundred million years for coal.
- The only routes to the socket not supplied by the reactor are nuclear fission, tidal power and geothermal heat, which draw respectively on a dead star, the Moon and the heat of the planet's construction.
- Storage is the crux. The Carboniferous stored sunlight at a poor efficiency and kept it for three hundred million years; a lithium battery stores it at a good efficiency and keeps it until the evening. The customer's timetable, not the reactor's, decides how much is needed.
- The Lost Hills chart shows the whole arrangement in a single day: sunlight in at noon, sunlight out at nine in the morning and nine at night, and a battery in between doing what a swamp used to do.
- The proprietor's sentence is true. It is not a forecast but a description of the existing arrangement with the delivery time shortened, and the terms and conditions are as set out in Table 9.1.

Principal finding. All electrical loads did transition to solar. The transition took place in the Carboniferous, and the customer has been running down the battery ever since. The proprietor's contribution is to propose collecting the delivery at the door, which the Department regards as sound, overdue, and not free.

Secondary finding. The reactor in the sky has never sent an invoice, never been late, never gone on strike and never been the subject of a public inquiry. The Department has assessed every other supplier of energy to the College since 1667 and can say this of none of them, including the Bursar.

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Sources were consulted in September 2026. King Ethelred's College is fictional; the reactor is not, and has been asked to confirm nothing.

APPENDIX A - SAMPLE CALCULATIONS

A.1 An hour of the reactor against a year of the customer

$P_{\text{sun}} \times 1 \text{ hour} = 173,000 \text{ TW} \times 3,600 \text{ s} = 6.2 \times 10^{20} \text{ J}$. World primary energy use: about 620 EJ = $6.2 \times 10^{20} \text{ J}$ a year. The reactor delivers in one hour what the customer uses in one year. The Bursar has asked why, in that case, the bill is what it is, and has been referred to Table 9.1.

A.2 Lost Hills, one day

11 MW of panels at roughly six equivalent hours of full sun: about 66 MWh a day. Storage of 39 MWh is therefore some 60 per cent of a good day's generation, or about three and a half hours of the 11.4 MW peak. 6,038 sessions over four days is about 1,510 a day; at 164 stalls, about 9.2 a stall a day, rising to the operator's 11.2 on the Monday.

A.3 The Senior Common Room panel

Two square metres at about 1,000 W per square metre of clear-sky noon irradiance and 15 per cent module efficiency in practice: about 300 W. Boiling 0.3 litres from 15 °C requires about 107 kJ; at 300 W that is six minutes of noon sunshine, or, allowing for the afternoon the Department actually got, a wait until 16:20.

APPENDIX B - THE BURSAR'S CARD

If asked	Answer
Is the Sun free?	Yes. Everything between it and the socket is not.
Is coal solar?	Yes, delivered late.
Is petrol solar?	Yes, delivered late and by sea.
Is nuclear solar?	No. It is the ash of a different star. Say this at dinner.
Is the tide solar?	No. Invoice the Moon.
What about the night?	Storage. Formerly a swamp, now a box.
Should the College install panels?	The Department refers the Bursar to Section 8.3 and the weather.

Table B.1 - Answers approved for the Bursar's use at the Finance Committee.

APPENDIX C - FUTURE WORK

The Department proposes a companion study of tidal power, the only route with an external creditor, to establish whether the Moon's account has ever been settled and, if not, by whom. The Department of Applied Geopolitics has asked to be consulted before any approach is made.

A second study will examine the round-trip efficiency of the Carboniferous in detail, with a view to establishing whether any battery manufacturer would accept a product that took sixty million years to charge. Preliminary enquiries suggest not.

The Senior Common Room panel will be left in place over the winter as a control. Mrs Partridge has been assured that the reserve kettle will remain connected.

APPENDIX D - DEPARTMENTAL NOTE

The Department of Fire, Energy and Retrospective Safety Engineering was founded in 1667, the year after the Great Fire of London, on what the College's records describe as the insistence of London. Its original remit was to establish where the energy in a city comes from, where it goes, and how to prevent it going there all at once. It has since extended the enquiry to the source of all the energy there is, and has found, to nobody's surprise but its own, that the answer is the same in every case and has been for four and a half billion years.

The Department records that this thesis was written by daylight, that the figures were drawn by a computer whose electricity came from the reactor by way of a swamp, a power station and the Bursar, and that the tea was made by Mrs Partridge from the reserve kettle, which the Department regards as the correct engineering decision and the reactor, if consulted, would too.

Persevera Etelred

