

NOTICE

The producers and distributors of this booklet formally abjure, oppose, and claim non-affiliation with the terrorist movement best known as the Butlerian Jihad.

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Disconnecting from utilities infrastructures (a.k.a. 'the grid') is not a criminal or civil offence according to any legal system prevailing in the UK at time of writing. However, it is frequently treated as evidence of intent for sedition or terrorist activity.

Possession of this booklet is not illegal in any way - but it may get you in trouble nonetheless.

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The daemon-haunted grid is a warning from from the universe, a curse of human hubris: the threat is less the grid itself than our total dependence upon it, and the reliance by those who rule us on mathematics mistaken for minds.

Unreliable, unaccountable, opaque, amok... how long will it be before a failure that they can't fix? Make no mistake, it will come. Prepare yourself for that day, and for the world that will come after.

**CUT THE CORDS. BANISH THE DAEMONS.
LIVE FROM THE LAND. LIVE FREE.**

AN OFF-GRID PRIMER

A GATEWAY GUIDE TO GETTING AWAY FROM THE DIGITAL DAEMONS



Image: Richard Waller, CC BY-SA 4.0, via Wikimedia Commons

Another way of life is possible!

For over a decade, utilities in the UK have been managed by algorithms, with close to zero human input. During that period, rates of failure and black-out have increased many times over. Who pays the price of these failures? You do.

Scared that the next AI-driven black-out will be the one that never ends?

This booklet is for you.

WARNING!

This booklet contains very basic information that could, with some effort and/or patience, be found from publicly accessible and legal sources. This is also true of our other booklets, which are available from whoever gave you this one.

HOWEVER: recent events have indicated that possession of ideas such as these, or simply a publicly-stated interest in or support of them, may be treated by the police and HM Government as indicators of sedition, criminal intent or even terrorist sympathies.

That is why this booklet, and others in the series, do not bear the name of any association or organisation. That is why you will have been asked not to talk about how you acquired them. You may be threatened with prosecution for refusing to talk, but the case of Darwish vs Crown [2029] provides precedent for your non-obligation to disclose the source of literature with no demonstrable seditious content.

If you are concerned by the risk of prosecution, we suggest you destroy this booklet (and others) after transcribing whatever information you deem valuable. (You could use it to light your rocket stove...)

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OPSEC

'OpSec' is an abbreviation of a term-of-art from espionage: operational security.

To repeat a crucial point: we describe no illegal activities in this booklet nor any other, and choosing to disconnect from the grid is neither a criminal nor civil offence under British law (at least at time of writing).

Despite this, HM Government, the police, and numerous local and regional authorities have all chosen to treat disconnection - enacted, or even simply intended - as indicative of potential criminality. It is assumed that off-gridders are sympathetic to the aims and methods of the so-called Butlerian Jihad - despite the clear contradiction between the former's desire to escape the grid, and the latter's intent to "reconquer" it.

It is this conflation by the state and its enforcers that necessitates that you develop and enact an opsec protocol. The intent is not to conceal your activity - it is impossible to hide your absence from the grid, and highly inadvisable to try - but rather to prevent infiltration by operatives from the Butlerian Jihad or similar movements, for whom off-grid homesteads offer both potential cover and potential recruits.

This needn't mean complete social self-ostracism, but it does mean caution and discipline. Booklet #42 provides a starter strategy, and guidance for adjusting it to your particular circumstances.

MOBILITY

Even if you intend to go completely off-grid, you'll find that **there are some things you just can't produce for yourself - company not least among them.** This means you're going to need to go to the nearest town from time to time, and perhaps carry a decent mass of things with you.

Those who want to go all the way back in time may want to look at horses or other draft animals (see booklet #43), but this option is not as simple (or romantic) as you might have imagined. Even if you get things sorted back the homestead, you may find that **parking spaces for horses are hard to come by in most towns** (at least for now).

The bicycle (and its mechanical relatives) are the inarguable peak of human engineering with regard to efficient and sustainable travel, and should be chosen wherever possible.

However, some landscapes are just not suited to the bicycle, even with battery assist. Also, if you have a biggish plot of land, you may need to move heavy stuff around, plough, excavate. It's a controversial option among many off-gridders, but **using a fairly small and simple tractor powered by biodiesel is incredibly efficient**, even when the emissions are accounted for (see booklet #42); producing your own diesel (booklet #42B) should be easy, if you've land enough to need it.

You won't want to ride that tractor into town, though! Indeed, you won't want to do anything to attract extra attention, should you find yourself obliged to enter the grid once more...

THE SITUATION

For many of the people already living off-grid in the UK, the ecological argument was enough - and we commend them for leading the way from the 1960s onward, and building a body of knowledge and practice on which our booklets draw heavily.

For others, such as ourselves, the decisive push came with the automated algorithmic management of energy infrastructure in this country. Not only were we paying more every year to companies who shirk any responsibilities other than to their shareholders, we were paying for a system which became more unreliable with every passing year.

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There are three possible responses to the grid's downward spiral. First, you can just accept it - and if you can, we suggest you probably should. The other options are not easy.

Second, you can declare war on it. This is the choice made by the so-called Butlerian Jihad, which (for the record, and the avoidance of doubt) we reject as not only violent and criminal but ultimately counterproductive. The Jihad claim to be fighting to reclaim the grid for human control. We, by contrast, renounce any claim to the grid... and its claims on us.

Which leaves us the third option: you can disconnect yourself from it entirely, and rely only on the land, your labour, and your wits.

Still interested? OK - keep reading.

THE LONG GAME

The first thing you're going to have to give up is not the grid, but your leisure. You'll get it back eventually, but the first few years are going to be tough, and you need to accept that.

You will also have to give up living alone, assuming you currently do so. For reasons of resources, property options and labour-pooling, a stable household of four or more adults is most likely to make a sustainable go of it.

You will also have to give up the choice to have children, unless you've already had them and seen them to legal maturity. Laws aimed at preventing child abuse and deprivation have been misused successfully to deprive off-grid families of their property and rights, and in some cases their children. DO NOT TAKE THIS RISK - for the sake of your children, but also for the sake of other off-gridders. We're tarred with enough brushes already, thanks.

Finally, you'll need to give up your capital, in order to buy a suitable property. Then you'll disconnect in stages, as this booklet explains.

It should go without saying, but you can't go fully off-grid in a city or town, or even a village. Sure, your home might be able to endure a long black-out - but what about everyone else's? And whose door will they knock at for help? Who might they decide to blame?

It may never come to that, of course - we all hope not. But hope won't help much if it does.

WOOD

Just in case you haven't worked it out for yourself already: you're going to need a reliable supply of wood for your homestead.

HEATING IS THE LARGEST PART OF THE HUMAN NON-INDUSTRIAL ENERGY FOOTPRINT. DOING WITHOUT FOSSIL FUELS OR ELECTRICITY FOR HEATING IS POSSIBLE, AND WOOD BURNED BY THESE METHODS IS EXTREMELY EFFICIENT AND LOW ON EMISSIONS. BUT YOU WILL NEED TO SECURE YOUR OWN LINE OF SUPPLY.

The annual cordage of wood you need will depend on your property and its location, as well as your equipment. If you have sufficient land, planting new trees or coppicing existing ones may suffice, but it may take a few years to get a decent stock and flow established (see booklet #36). (This is why you disconnect your old heating systems last of all, after the retrofit of the house.)

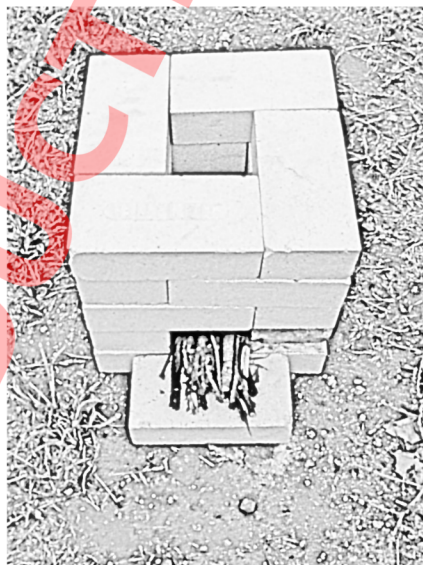
In rural areas, other local residents may become intermittent sources of fuel, if you're willing to clear and haul it away - though escalating energy costs mean wood is less often seen as waste than it once was. Local woodland may likewise present opportunities, but beware the legal risk of trespass and abstraction (see booklet #52).

A storage space close to the house will be required, in order to keep your fuel reserves dry and free of rot (see again booklet #36). Depending on your location and microclimate, a lean-to or shed should suffice.

HEATING FOOD

The use of wood-fueled rocket stoves for outdoor cooking began to go mainstream among campers and off-grid folk in Europe in the late '20s - though it should be noted that this technology had been in use in so-called 'developing' countries for decades, and even centuries previous!

As such, high-quality rocket stoves can be purchased from camping and outdoor-oriented retailers - but we recommend making your own. Not only will it be a good starter project for building your DIY capabilities, you can likely also scavenge the necessary materials very cheaply, if not for free (see booklet #17): a very simple rocket stove can be made from a few dozen housebricks. ->



Once the principle is understood, you can scale up to more efficient builds as you happen upon suitable materials. For larger households, or those with more ambitious culinary aspirations, a rocket oven (for baking and roasting) may also be worth considering. Note that these are by necessity fairly large installations (see booklet #18), and sourcing the necessary components may be a little harder - though far from impossible!

PICKING A PROPERTY

If you really want to be free of the hazards of a utility grid run by poorly-programmed digital daemons, you're probably going to need a farmhouse of some sort - unless you've got enough money to just buy land and build from scratch, in which case you probably don't need our advice!

An old farmhouse will likely have its own supply of water (or the potential for such), and some land associated with it. Ideally, it will also be fairly remote from other dwellings. How much land you need depends on how big your household will be, and how far you want to go with self-sufficiency with regard to food production (see booklets #20 and #21) - but you'll need land for other reasons, as discussed below.

You're going to have to do a hard retrofit of whatever property you end up buying, because the best way to save energy is to minimise heat escape during the cold seasons. Retrofitting is simple in principle, but in practice every project is entirely bespoke; to avoid buying a turkey, you need to know what's practical (see booklet #19) before you start househunting.

Ultimately, your options will be shaped most by what's available and what you can afford, and the UK property market is notoriously confusing and overpriced. We recommend looking in areas where sheepfarming once dominated, as such land is often unsuited to industrial agriculture and hence more affordable.

The golden rule is DO YOUR RESEARCH - "measure twice, cut once", as the proverb goes.

ENERGY GENERATION

This one's easy: **solar, solar, solar**. Photovoltaics are cheap, recon panels **cheaper** still, and the wiring's simple and **safe** (see booklet #5). How many Watt-hours will you need? Less than you might think - though **extra** capacity is never a bad thing to have, **provided** you can store it.

Why not windmills? **Less efficient**, tricky **maintenance**. If you know **your** way around a toolkit, go ahead (see booklet #8), but get PVs for back-up. **River on your property?** **Hydropower might be worth a look** (see booklet #9), but there may be legal hurdles as **well** as technical ones.

STORAGE

Three main options here. **First, a commercial domestic battery pack**. A good choice, if you can find one that **will work** without any connection to the grid or the **net**. (Good luck with that.)

Second, a lash-up made of reconditioned EV batteries. **Fairly** easy, fairly safe - but again, **follow booklet #9!** - and relatively cheap, but batteries **don't** hold charge forever. You'll need to keep **acquiring** substitutes as the years go by.

Third, and most ambitious: compressed air energy storage (CAES; see booklet #9). Commercial **systems** are very efficient, and very expensive. **Comparable** results can be achieved by DIY means, but **this** sort of project is definitely not recommended for hobbyists and bodgers.



HEATING WATER

Water for cooking or **sanitation** can be boiled with a **rocket stove** (see over page). Once boiled, water can be kept **at a high temperature** (though not at boil) on the **hotplate** of a basic RMH, as shown above.

Depending on **location** and season, **water for human hygiene** can be **heated** by solar means, but **this is not a reliable option** in the UK (at present). Depending **on house layout** and resources, you may wish to **consider** a separate rocket stove assembly **specifically** for heating a certain volume of **water** per day, or integrating a warm-water tank **into** a larger RMH set-up.

(No **harm** in treating a tank of water as extra **radiative thermal mass**, after all...)

HEATING SPACE

R. M. H. These three little letters are going to become your best friend! A rocket mass heater is the most thorough and efficient way to burn the most renewable of fuels (namely wood), and to maximise the use of the heat generated.

The energy of both combustion and exhaust is captured by and RMH and then released as radiant heat, rather than the convection of 'modern' heating systems. This means you need a bunch of M-for-mass to store that heat, and mass means space; furthermore, you need to be near to that mass to get the benefit of the warmth, which means space in the rooms where you spend most of your time. Which is to say: your RMH will become, quite literally, part of the furniture.

The principles of the RMH can be put to work in a very cheap and lo-fi installation, as illustrated overleaf. (See also booklet #14.)

Those with bigger budgets (or more refined aesthetics) may wish to look at integrations better suited to the architecture, or at a tile-stove, which uses similar combustion principles to the RMH to provide not only radiant heat but also indoor cooking facilities and (optionally) heated water for washing.

How about ground-loop geothermal? Again, if you've got the land (or a pond) and the money, or you know an excavation contractor, go for it - but it's yet more expensive hardware to maintain, and you still need electricity for the pump. An RMH only needs wood, and your time.

LIGHT

Light in the dark months was one of the great challenges of our pre-industrial forebears - so if you have any romantic notions about rush-tar torches, or candlemaking at the sort of scale that would keep a household going all winter, we suggest you abandon them now. (That said, chandlery is a nice supplement to beekeeping, and you can sell rustic candles for a pretty good price to city-folk alongside your honey.)

LED lighting (booklet #5) needn't use much stored wattage, provided you're sensible about it. We would suggest, however, that getting as much natural light as possible is always preferable - something to think about when picking a property and planning that retrofit, perhaps.

COMPUTE • COMMS

This may be hard to swallow, but nonetheless: going off-grid means no internet, whether it's wired or wireless. Keeping a low-tech dumbphone for emergencies is advised, however - as is keeping it switched off until needed. Anything more complex is a threat vector, a doorway for the daemons and a way for the State to keep tabs on you (which they will try to do).

You don't have to do without electronics, however. Well-maintained vintage machines and 'scraptops' running *nix operating systems can provide entertainment and tools for interacting with the world outside. As for connectivity, get yourself used to going into town to get online.

REFRIGERATION

Refrigeration is one of the tough challenges: it's a huge part of our energy footprint, collectively and individually, but doing without it entirely would be devastating to our health, and/or require an agrarian context which has long since disappeared. Put more plainly: you're going to need a fridge, though maybe not a freezer.

Low-energy DC fridges and freezers can be bought, but they're very expensive and often quite small. However, consumer-grade kit can be hacked for greater efficiency, by e.g. replacing AC compressors with DC, or swapping out the thermostat and turn a chest-freezer into a fridge. Avoid the temptation of gas-powered devices: they're not dangerous, but your dependency on a supply of gas sure will be!

Even super-efficient refrigeration is going to use up a lot of your solar wattage - and while the peak demand will likely occur on the sunniest of days, you should be developing a mindset of pushing down energy usage at all times and in all circumstances.

In all such cases, sufficiency is key - efficient devices, yes, but also doing everything you can to reduce your reliance on the device in question. When you see how fast a regular domestic fridge-freezer will drain your battery-bank, you'll quickly start looking for alternatives!

Thankfully, there are whole centuries of pre-industrial human activity on which to draw for ideas. Here are just a few...

PANTRY PLANNING

Root cellar: whether it's the space beneath your house, a small room dug into a hillside, or a bunch of zinc dustbins buried in the ground, a root cellar keeps root vegetables cool and prevents them from drying out. Cheap, reliable, no-tech storage.

Zeer pots: unglazed ceramic pots can be nested in one another with a layer of wet sand in such a way that evaporative cooling keeps the internal temperature nice and low. Not quite so cool as a fridge, but plenty cool enough to keep veg and salad fresh for days.



Pickling: aspiring off-gridders from the Millennial generation should feel at home with pickling as a form of food preservation, if only from the consumption side. Luckily the production side is fairly simple to learn, too.

A note about meat

In line with permaculture thinking, we do not advocate eradicating animal products from the human diet or from sustainable agriculture.

However, we do recommend eating a lot less meat, because it's expensive and relatively hard to preserve. For tips on managing meat from farming or hunting, see booklet #19.