

Essay written by adison verlice.

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Problems of the electrical grid

Description of the essay:

The essay is about how the problem of the power grid continues to rise as there “may” be a national blackout, but we’ll get to that later.

The problem with the grid.

The power grid powers several homes, businesses, and even enterprises. However, the grid has several failures that could cause major problems, mainly the problem of power outages. This is a problem because homes that rely on their trusty freezers, businesses that rely on their payment systems, and enterprises that users rely on could go down at any time. Here we will explain a few of them.

Causes of outages in the grid.

1. The power grid being hacked.

The power grid is a list of nodes/computers, and a power source.

If the grid gets hacked, the impact will be great.

[read this pdf about a cyberattack on the grid](#)

Date: april of 2017

Author: robert k. Knake.

Publisher: council on foreign relations

Summary: it describes a cyberattack on the US power grid, though it can be applied to the world as is.

2. The grid being taken down, accidental or on purpose.

Another alarming key is the US electric grid being accidentally taken down, be it being unplugged maybe by accident or maybe someone accidentally ran over a wire that triggered it, or did it on purpose to get revenge on you winning a game.

Regardless, it is bad for everyone involved.

See [How dead ends undermine power grid stability](#)

Authors: [Peter J. Menck](#), [Jobst Heitzig](#) and all

Publisher, nature communications

Here is an example of it being done on purpose.

To see this, we have to go all the way back to 2003, in the absolutely great and totally not power hungry state of california.

On 6-25-2003, the federal energy regulatory commission (FERC) revoked Enron corporation's license to trade wholesale energy.

This is because Enron was trading energy out of state. This caused California to have high electricity bills, and rolling blackouts over the years.

<https://www.cambridge.org/core/journals/business-history-review/article/enron-and-the-california-energy-crisis-the-role-of-networks-in-enabling-organizational-corruption/457B1E245C6E6DE8903F531DD768D3F4>

Authors: adam nix, stephanie decker, and all

Publisher: cambridge university

Coldfusion has a great video about enron. Watch to around 11:00 and you will find their energy ceiling in that part of the video

<https://www.youtube.com/watch?v=e5qC1YGRMKI&t=188s>

Author: cold fusion.

Publisher: youtube

Date: 8-30-2019

3. Greedy power bills

You and I both know that power companies are waiting to eat some delicious money. But, if you don't pay your possibly expensive power bill, you can kiss the grid goodbye, as the power companies will not be on your side.

See:

<https://www.foodandwaterwatch.org/2024/07/17/energy-bills-are-rising-climate-change-will-raise-them-higher/>

Authors: Kat Ruane and Brooke Errett

7-17-2024

So who does this problem affect?

This problem affects the following:

You!

The person who would suffer the most is you. Your freezer is not able to freeze your foods, your microwave is not able to fry your pizza, and your tv will not work.

Your businesses

Do you have a business?

Congratulations, you are affected! Your credit card terminals, computers, security systems all shut down by the outage.

Important organizations like food processing units

Food processors, government agencies, educational institutions, all taken out by this 1 outage.

So, how can you protect yourself from this massive outage? How can you get prepared?

Solar panels

The absolutely based way is to stay off the grid. Get your solar panels, get your wind turbines, get whatever you can to stay off the grid.

See: [how livin off the grid can save you money](#)

Plus, you will have your own production of energy.

Get renewable energy and produce for the grid.

If you can fire back to the grid, given you have met all requirements, you are not only doing something for you, you could also do net metering, which can pay you, either with credits, or actual money.

<https://impactenergy.net/solar-net-metering-in-colorado/#:~:text=Net%20metering%20ensures%20no%20solar.gain%20greater%20energy%20self%2d Sufficiency.>

Get a battery system

The best way to protect yourself on the grid is to get a battery system, chargeable via the grid.

Note that this may only protect you during short-term power outages and are costly.

<https://greenridgesolar.com/battery-backup-summer-power-outages/#:~:text=One%20of%20the%20most%20significant,security%20systems%2C%20continue%20to%20operate.>

Publisher: [Timothy Deters](#)

Publisher, green rich solar

6-25-2024

The best solution:

The best solution is off grid for the following reasons

You do not have to pay utility bills

Utility bills are high, but if you go off grid, you won't have to worry about them.

No worrying about the grid being down.

If the grid goes down, you won't. All you need to worry about is the sun being up, or the winds being high, depending on the system.

Energy independence

Most importantly, you will be energy independent and free from company. You can control how much power is being produced, as long as you have the resources.

In conclusion

The power grid is very flawed in its infrastructure and, as it is, must be fixed.