# Securing the power supply

## Blackout due to lack of maintenance?

*by Jakob Wehrli*

*Without really being aware of it, we are gradually heading towards a blackout – in other words, a prolonged and large-scale power failure in Europe, with catastrophic con-sequences. In recent weeks, this issue has been in the headlines once again.*

The news of a possible imminent power failure is disturbing citizens – last time on 8 January 2021, at around 2 pm. Violent fluctuations in network voltage were apparently reported throughout Europe.[1] Once more, there was a high danger of a collapse. In March 2020, at the beginning of the covid-19 epidemic, we learned that the European power supply was under serious threat due to the absence of a few network specialists. Special Covid protection measures were therefore put in place for those people working in the control section. They were quarantined as a precautionary measure.[2] The issue at stake: a failure of parts of the power grid could lead up to a Europe-wide blackout, with catastrophic consequences – and not only for the economy.[3] A blackout would be even more devastating than a strict, long lockdown.[4]

### Power grid under pressure

The load on the European power grid, which has been gradually increasing for several years, fell sharply in the spring of 2020 due to lockdowns in various regions. This situation was already technically problematic. Sharp fluctuations [frequency drops] on the network load endanger the necessary voltage frequency range, without which the grid cannot operate. For this reason, the upturn [frequency increase] in electricity usage was not without risk.[5] In the meantime, electricity consumption has increased again. However, recent fluctuations early January took specialists, once again, by surprise. What was the cause? Was it a rise in energy consumption as a result of the onset of winter in Romania? Was the infrastructure damaged? Is there still enough capacity left?[6]

### Risky energy transition

Given that power grids are now closely interconnected across Europe, with producers of fluctuating energy from the sun and wind having at the same time to be increasingly integrated to control systems generating a sufficient quantity of electricity, the risks of power outages are increasingly dramatic.[7] The costs just to stabilize the power grid now squanders more and more money.[8] The reason for this is that Switzerland and Germany are phasing out their stable electricity producer, namely their nuclear and coal-fired power plants, and are confident that they will get enough power from other countries to compensate for their power fluctuations.

### A blackout has devastating consequences

In recent years, various contributions have been published in the media describing the dangers of a blackout in a manner that is readily comprehensible. It is worth listening what they have to say.[9] You have to imagine it vividly: a total blackout would relatively quickly affect the entire water supply, public transport, road traffic, hospitals, etc. The transmission of data that is absolutely necessary for freight transport logistics would fail.[10] If the blackout were to last for a few weeks, we would be faced with conditions similar to those prevailing after a long war.[11]

### Problematic drop in tax revenues

The causes of a blackout can be manifold: natural disasters such as floods, hurricanes, broken poles due to icing on power lines or cyber-attacks by hackers against electricity suppliers, but also the neglect of infrastructure – whether due to declining tax revenues or privatisation of infrastructure (as in the US, for example).

### Controlling the energy sector

What applies to the power supply also applies to many other areas of public utility: they urgently need to be decoupled and brought back under

public scrutiny. Electricity supply is just as unsuitable for profit maximisation as other essential services such as water, health or education. These areas are essential for the functioning of society and must be managed in the public interest, to serve the common good.

*(Translation «Swiss Standpoint»)*

[1] Frankfurter Rundschau. Droht Frankreich ein Blackout? 8.1.2021. Oberösterreichisches Volksblatt. Erneuerbaren-Ausbau erhöht offenbar Blackout-Gefahr. 10.1.2021. ORF Wien. Blackout-Gefahr: Immer mehr Noteinsätze. 10.1.2021

[2] *https://www.saurugg.net/2020/blog/krisenvorsorge/die-corona-krise-und-die-steigende-blackout-gefahr*, 17.3.2020. Herbert Saurugg's homepage offers detailed and broad information on the topic of electricity supply..

[3] *https://www.saurugg.net/blackout/risiko-eines-strom-blackouts*

[4] *https://www.saurugg.net/blackout/risiko-eines-strom-blackouts*

[5] e.g. situation in Austria: *https://hlk.co.at/a/netzstabilitaet-und-ausbau-darauf-kommt-es-jetzt-im-oesterreichischen-stromnetz-an*, 21.4.2010

[6] *https://www.ingenieur.de/fachmedien/bwk/energieversorgung/strom-europa-schrammt-am-blackout-knapp-vorbei/*, 13.1.2021

[7] *https://www.energieverbraucher.de/de/stromnetz__1335/NewsDetail__18182/* vom 4.7.2019
«‹Wir schalten jetzt Hamburg ab›. Zwei Experten der Universität Bremen bestätigen das grossflächige Stromausfälle durchaus passieren können. Interview Kai Uwe Bohn.» uni&gesellschaft. S. 40–43. *https://intrapol.org/2020/04/29/wir-schalten-jetzt-hamburg-ab-interview-mit-dem-magazin-der-universitaet-bremen-up2date/*

[8] You could read that 2018 in the «Basler Zeitung»: *https://www.bazonline.ch/ausland/europa/kosten-fuer-energiewende-explodieren/story/13230493*, 6.1.2018

[9] Several well-documented programmes have been broadcast on the subject of blackouts:
SRF: *www.srf.ch/kultur/wissen/ blackout-alle-videos-des-fiktionalen-dokumentarfilms* von 2017,
ORF: «Im Kontext – Was passiert, wenn der Strom wirklich länger ausfällt» *www.youtube.com/watch?v=UQR9xXNKojw* von 2018 or
WDR: *www1.wdr.de/mediathek/video-blackout--die-illusion-vom-notstrom-100.html* von 2019

[10] *https://www.saurugg.net/blackout/auswirkungen-eines-blackouts*

[11] ORF: «Im Kontext – Was passiert, wenn der Strom wirklich länger ausfällt» *www.youtube.com/watch?v=UQR9xXNKojw* von 2018