DISASTER DRAW

When the Sky Turns Green

Space weather and the systems between the Sun and your home

November 2026 · Concise digital edition



About this edition

An original synthesis of linked primary accounts and practical discussion exercises. Hypothetical scenes are identified in the text. Independent expert review is pending. Consult current local instructions for an actual emergency.

Contents

The nine-hour night

Three things that travel from the Sun

The long wire to breakfast

The first hour belongs to the household

A warning needs a reader

Six seconds in the system

The person who has to decide

A future written in conditions

When the lights return

Practice and source notes

The nine-hour night

The March 1989 Québec blackout is unsettling because its starting point was so far from the people who lost electricity. A disturbance on the Sun became an electrical problem on Earth. Hydro-Québec describes a province-wide interruption lasting more than nine hours. Its account also identifies a practical vulnerability in the geography of its system, with long transmission lines carrying power across the province. The light switch at the end of that system could reveal the failure without explaining it. Hydro-Québec

That distance between cause and experience is the subject of this book. The household sees a dark kitchen. The grid operator sees an electrical system under stress. The forecaster sees a disturbance moving through space. Each description is useful. None gives a household every decision it needs to make before breakfast.

Imagine a household in a future outage. This is an exercise, not an account of a particular family in 1989. One person searches for a flashlight. Another checks a phone. A third remembers something about an aurora forecast. Ten minutes pass while they try to establish a cause. The refrigerator has been warming throughout the conversation, and a neighbor upstairs still needs help with a battery-powered medical device. Explaining the sky and organizing the household are different tasks that have to proceed together.

Three things that travel from the Sun

Space weather is an umbrella for processes with different consequences. NOAA describes solar flares affecting high-frequency radio, energetic particles affecting satellites, and coronal mass ejections that can cause geomagnetic storms and induce currents affecting grids. A headline that compresses all of these into one universal electronic catastrophe loses the distinctions needed for useful decisions. NOAA

A person planning a trip needs to know which service might be affected and whose information to follow. An airline, a satellite operator, an electricity utility, and a family with a portable radio have different responsibilities. A warning about one technology does not establish that every other technology will fail in the same way or on the same schedule.

This matters when the sky becomes spectacular. An aurora photograph is evidence of something visible at a particular location and time. By itself it does not establish the condition of a local substation, the state of a water system, or tomorrow's delivery schedule. People can enjoy the sight while also checking credible local information. The photograph need not carry the burden of being a forecast.

The long wire to breakfast

Consider the meal you eat most often. Write down what it needs. Then add the services behind those objects. Toast needs a working appliance and electricity. Coffee may need tap water and heat. A delivered breakfast needs a working ordering system, payment processing, transport, and someone available to prepare it.

This is an authored planning exercise. Its purpose is to make dependencies visible before an interruption. You do not need to identify every company behind the meal. Three dependencies are enough to expose a useful question. If one fails, what can the household do without waiting for it to return?

The same method works for a small business. A remote employee with a charged laptop may still depend on a powered router, an accessible identity service, and a colleague who can authorize a change. Moving a workload elsewhere does not demonstrate independence if the substitute uses the same unavailable service. Ask the service owner to explain the dependencies in ordinary terms. Keep the answer where staff can read it during an outage.

The first hour belongs to the household

Start with the people whose needs are time-sensitive. A phone charging argument becomes easier when everyone already knows that one device supports a health or accessibility requirement. A relocation discussion becomes easier when there is a destination that has agreed to receive the person. These are agreements to make with the affected person and, for medical needs, the relevant care provider.

Then establish a simple record. When did the power fail? Who has been contacted? What is the latest utility update, and when was it issued? A handwritten page can do this. A large collection of apps is less useful if all the information is trapped behind a dark screen.

FoodSafety.gov says a closed refrigerator keeps food safe for up to four hours during an outage and advises discarding refrigerated perishables after four hours without power. It also warns against tasting food to decide whether it is safe. Follow its item-specific guidance when

assessing what can be retained. FoodSafety.gov

For the family in our exercise, writing down the time is more useful than repeatedly opening the refrigerator. That action does not require certainty about the storm's cause, strength, or duration. Some of the best early actions work across several possible explanations.

A warning needs a reader

Choose one person to follow official utility and local emergency updates, with someone else able to take over. Their job is to pass along the issuer, the time, and the consequence for the household. A message that says the utility has revised its estimate is more useful than a screenshot circulating without a date.

The Red Cross recommends preparing communications and meeting arrangements with the people who will use them. An out-of-area contact and written contact information provide options when ordinary communications become difficult. The agreement matters as much as the chosen technology. Red Cross

Try this conversation at a table. Each person silently chooses whom they would contact if everyone were separated. Say the names together. If the answers differ, the exercise has found a planning gap while the lights still work. Resolve it with an actual conversation with the proposed contact.

Six seconds in the system

The reliability council's report on the March 1989 disturbance gives the event a different rhythm from the household story. It describes the shutdown of seven static compensators on the La Grande network just before 02:45 EST, the loss of 9,500 megawatts of generation from that network, and the remaining network's collapse within seconds. These are system-specific findings from the historical investigation. They describe a

sequence in a particular network under exceptional conditions. NERC event report

The scale of the numbers can make the event sound remote from daily life again. But the timing brings the household back into view. Electricity is a service people experience as continuously available. A system can move from an engineering problem to a regional interruption faster than a resident can decide whether the lamp has failed.

This is why a warning cannot be the only layer in a plan. Operators have work to do before and during an event. A household also benefits from preparations that are already in place. Accessible light, known contacts, and an agreed place to go do not have to be assembled in the interval between a disturbance and a dark room.

The historical report should also discourage an overly simple story about damage. An interruption, protective equipment operating, and permanent equipment damage are different descriptions. A reader should ask which one an account actually establishes. A dramatic video can tell us that customers lost service without establishing the condition of every component needed to restore it.

The person who has to decide

Imagine that you manage a small organization serving people who cannot easily obtain the service elsewhere. An official space-weather notice appears. Your staff ask whether they should cancel the next day. This is a hypothetical management exercise. Begin by writing down the decision, the deadline, and the consequences of acting too early or too late.

Next, separate the information you can obtain from the information you would merely like to have. You can check the utility's notices, the building's arrangements, and your staffing requirements. You may be unable to obtain a reliable local outage prediction. A workable plan

should survive that gap. Perhaps some activity can move to an alternate format while a more consequential service receives closer monitoring.

Assign responsibility for the next update. Without that assignment, several people may spend the evening checking the same sources while another necessary task receives no attention. A handover should be short. State what is known, what remains uncertain, what has been decided, and when the decision will be reviewed.

Now bring the same exercise home. A household does not need an incident-management vocabulary to agree that one person will read utility updates while another checks the neighbor. The useful feature is the assignment. It makes attention available for more than one need.

A future written in conditions

A severe-storm scenario can be educational if it states what it assumes. Suppose an exercise assumes a local power interruption lasting overnight. That is enough to test a meal, contacts, lighting, and medical backup. A second exercise can assume several days and examine relocation and recurring needs. Neither exercise claims to forecast the next storm.

This gives a group a way to explore consequences without accepting a sensational universal timeline. Ask what would change the decision. If the restoration estimate improves, what can wait? If a health need becomes urgent, what must happen regardless of the estimate? Conditional decisions are easier to revise honestly than a promise that everything will be normal by a particular hour.

At the end, preserve the distinction between science and rehearsal. The historical event explains why the subject deserves attention. The exercise exposes dependencies in your own circumstances. The utility and public authorities supply operational information when an actual event occurs.

When the lights return

Restoration is a stage of recovery. It creates another set of questions. Is the water utility still issuing an advisory? Which food needs assessment? Has the person who relocated been reached? Which business services remain unavailable? A working lamp cannot answer these questions for you.

Keep a short record of what proved useful. Replace depleted supplies and fix the instruction that confused the guest. Resist the temptation to make the next plan depend on predicting the next extraordinary event precisely. The household benefited from shared contacts, accessible light, usable food, and a place to go. Those improvements will still matter if the next interruption begins with a winter storm instead of an aurora.

Practice and source notes

The companion 24-card deck alternates scientific distinctions with household decisions. Play three cards at a sitting. Let everyone answer before revealing the back, then choose one action and an owner. These are discussion exercises, with sources for the underlying science and preparedness principles.

The historical anchor is the March 1989 interruption. Future household and workplace examples in this edition are hypothetical. No restoration duration is promised for a future storm. Sources were checked on November 16, 2026. The linked utility, NOAA, food-safety, and Red Cross accounts distinguish history, physical mechanisms, and practical preparedness. Current local instructions should be checked during a real event.