



Wisconsin Food Code Fact Sheet



DISRUPTED ELECTRICAL SERVICE

Power outages are one of the most common emergencies that impact food establishment operations. Power outages may be short, lasting only minutes to a few hours, but in some cases, the loss of power may continue for several days.

It is recommended that the license holder note the date and time of the event. Brief interruptions that do not impact food safety may not require emergency procedures. When there is an extended loss of power, it is recommended that the Person in Charge (PIC) implement emergency procedures. Immediately, discontinue operation if a safe operation cannot be maintained or if food safety cannot be assured using an alternative procedure. If there is a significant threat or danger to health, the license holder should immediately discontinue operations and notify the regulatory authority.

Public Health Considerations

During a power outage, one of the primary concerns is to protect the health of employees and customers. Always consider if there is an imminent health hazard that would not permit a safe operation. Has there been an evacuation order that would require you to close the facility? Could employees safely get to work and once they arrive will they be safe in the facility? Does remaining open provide access to resources that will be of assistance to the community?

Planning Ahead

Responding to short term or extended loss of power will require careful planning. Determining whether Time-Temperature Control for Safety (TCS) foods are safe to hold, sell, or serve will require a detailed plan for how you will monitor temperatures and make disposition decisions on the safety of TCS food.

Refrigeration Emergency Procedures

- Record the starting time of the power outage.
- Monitor and record equipment and TCS food temperatures from the start of the power outage. Open upright retail cases without doors and small reach-in cases should be monitored more frequently since they will lose temperature faster than other equipment.
- Keep refrigeration equipment doors closed. For open retail cases without doors, use insulated covers, cardboard, plastic or equivalent to retain cold air.
- Relocate product in cases that cannot maintain safe temperatures to walk-in coolers, freezers, or refrigerated trucks.
- Do not put hot food into refrigeration equipment.



Methods for Maintaining Refrigeration Include:

- Refrigerated trucks: Refrigerated trailers and trucks with insulated storage containers may be on-site or delivered to the food establishment during an emergency.
- Warehouse: Determine if a refrigerated warehouse that is unaffected by the power outage or that has a back-up generator or alternate power source is available.
- Ice or frozen gel packs: These can be used to help keep food cold. Consider storing frozen gel packs on-site to use during short term emergencies.
- Dry ice: Dry ice is dangerous to handle because it is so cold. Also, CO₂ gas is heavier than air and can displace the oxygen we need to breathe. Do not place dry ice into a sealed room, cooler, or container without allowing a means for the gas to escape as it changes from its solid to gaseous state. If dry ice is used, pack TCS food tightly together and place dry ice above foods to allow the cold CO₂ gas to sink and fall over the food items. Precautions must be taken to avoid burns when handling dry ice.
- Generators: Determine which equipment is operated by the generator. Generators may not routinely have the capacity to operate critical equipment such as refrigeration and freezer units. In that case, consider additional generators for maintaining refrigeration, including portable generators (owned or rented) that can be transported to the facility during an emergency. A plan should be in place to refuel generators during long term power outages.

Lighting

- Diminished or lack of artificial illumination may impact personal safety. Without sufficient lighting, you may not be able to properly perform food safety related tasks such as food preparation, food handling, cleaning equipment/utensils, and cleaning the premises.
- Artificial light may be available if you are using a generator or other lighting source such as battery-operated fixtures. Restrict operations to those procedures that can be safely conducted using alternative lighting. If sufficient natural light is available, limit operations to daylight hours.

Dishwashing

- Use three-compartment sink if hot water is still available.
- Use single service tableware.

Cooking Equipment

- Cooking equipment can be connected to an alternative power source such as a generator. However, fully assess if cooking operations can continue to be performed safely; consider temperature controls, hot holding temperatures, food handling, and equipment cleaning.
- Unless the ventilation system is operating on alternative power, there will be no way to remove cooking smoke, steam, grease laden air, etc. Without ventilation, you should discontinue cooking operations.

Safe Food Handling Procedures Hot Food Holding

If power returns within two hours, rapidly reheat food to 165°F within an additional two hours. The time the food is between the temperatures of 41°F and 135°F should not exceed two hours. If power does not return within two hours, product must be discarded within four hours from the time of power outage (unless it is kept above 135°F).



Cold Holding of TCS Food

Guidelines have been developed specifically for cold holding TCS food during a power outage that affects refrigeration temperatures. The time and temperature (T/T) recommendations and disposition criteria presented in Chart 1 are based on science to ensure the safety of TCS food and were accepted at the 2012 Conference for Food Protection. The chart is intended for use during an emergency and not for day-to-day operations.

| Procedures for Handling Refrigerated TCS Food During a Power Outage | | | | |
|---|-------------------------------|--------------------------------|--------------------------------|---|
| TIME (HOURS) | PRODUCT TEMPERATURE | | | |
| | Maximum Temp up to 45°F (7°C) | Maximum Temp up to 50°F (10°C) | Maximum Temp up to 55°F (13°C) | Maximum Temp up to 60°F (15°C) |
| Up to 4 | Hold/Serve/Sell | Hold/Serve/Sell | Hold/Serve/Sell | Hold/Serve/Sell |
| | | | | At 4 hours, cook or discard the food if it is still over 41°F (5°C). |
| | | | | If food temp is back to 41°F within the 4 hours, it can be held/served/sold. |
| >4 to 6 | Hold/Serve/Sell | Hold/Serve/Sell | Hold/Serve/Sell | Hold/Serve/Sell |
| | | | | At 6 hours, cook or discard the food if it is still over 41°F (5°C). |
| | | | | If food temp is back to 41°F (5°C) within the 6 hours, it can be held/served/sold. |
| >6 to 9 | Hold/Serve/Sell | Hold/Serve/Sell | Hold/Serve/Sell | Hold/Serve/Sell |
| | | | | At 9 hours, cook or discard the food if it is still over 41°F (5°C). |
| | | | | If food temp is back to 41°F (5°C) within the 9 hours, it can be held/served/sold. |
| >9 to 15 | Hold/Serve/Sell | Hold/Serve/Sell | Hold/Serve/Sell | Hold/Serve/Sell |
| | | | | At 15 hours, cook or discard the food if it is still over 41°F (5°C) |
| | | | | If food temp is back to 41°F (5°C) within the 15 hours, it can be held/served/sold. |

Note: The T/T combinations are based on conservative assumptions about pathogen growth and represent a wide margin of safety. Some TCS foods have an even greater margin of safety because they have protective characteristics such as low pH and/or water activity. You may want to consult the regulatory authority for appropriate disposition criteria for these types of TCS foods.



Recovery Following a Power Outage

Recovery involves the necessary steps for returning to normal, safe business operations, including reopening if the facility had to close as a result of the power outage.

A food establishment that was ordered or otherwise required to cease operations may not reopen until authorization has been granted by the regulatory authority.

Refrigerated TCS Food

The procedures for monitoring TCS food and disposition criteria are explained below. These guidelines can only be used if the time and temperature were monitored according to a written plan. If the time/temperature of TCS foods were not monitored during the power outage and the temperature may have exceeded 41°F (5°C), the TCS food should be discarded.

Refrigerated Non-TCS Food

Although non-TCS foods do not require temperature monitoring for safety, they should be closely examined for signs of spoilage, damage, or loss of package integrity following a power outage.

Frozen Food

Frozen foods that remain solid or semi-solid can be refrozen if food packages show no evidence of damage such as weeping, stains, physical deterioration, or evaporation. If TCS frozen food product is somewhat thawed or soft and has not exceeded 41°F on the outside and the inner core is still solid, it can be refrozen or further processed/cooked by food service operators. Non-TCS frozen food that has thawed can be sold, further processed, cooked, or donated.

Equipment and Facility

Assure that all equipment and facilities are operating properly, including lighting, refrigeration, hot holding, ventilation, water supply, hot water heaters, dishwashing machines, toilet facilities, and sewage pumps.

Documentation of Incident/Expense

Make sure the PIC records and documents all incidents/expenses incurred as a result of the power outage, including photo and video records, if possible.

Additional Information

[DATCP Food Code Fact Sheets](#)

[Emergency Action Plan for Retail Food Establishments](#)

[AFDO Food Emergency Regulator Pocket Guide](#)



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Note: this guidance pertains to retail food establishments only.