

# Portable generators

## For residential and farm use

**In the event of a power outage, SaskPower encourages all customers to know how to select and safely operate a portable generator. If you have questions, please contact SaskPower Gas and Electrical Inspections at 1-888-757-6937 (option 5) or visit [saskpower.com](http://saskpower.com).**

**Portable generators come in various sizes and are generally rated in watts or amperes before purchasing a generator, consider what you wish to power with it. By checking the wattage on the lamps/fixtures you plan on using, you can determine their running wattage. (see table below)**

### Operating

- Never operate a portable generator in your house, garage, or other enclosed building. Burning fuel in unventilated areas creates carbon monoxide (CO) — a colourless, odourless and deadly gas.
- Stored fuel creates a fire/explosion hazard. The National Fire Code states that only five litres may be stored in a residential dwelling or 30 litres in a garage/shed. A typical 3500 watt generator burns about two litres of fuel/hour at full load. Call your local fire department for requirements in your area.
- Starting motor-driven appliances may be a problem. Check with an electrical contractor or generator supplier to ensure adequate start-up power is available.
- Wear electrically insulated workboots when standing near an operating generator.

### Wiring

- Splicing into house wiring can cause fires if done incorrectly.
- A licensed electrical contractor is required to install the wiring necessary to connect your generator.
- The wiring from the transfer switch to the outside of your home/business is considered permanent, so extension cords are not allowed. Some transfer switches have a recessed male connector on the side from which a properly sized cord can be connected and run to your generator.

- Permanent wiring from the transfer switch to the outside of your home/business must be sized to the output rating of your generator. Typically, the permanent wiring terminates in a recessed male connector on the exterior of your building, from which you may use a cord to connect the portable generator.

### Transfer switch

According to the Canadian Electrical Code, a transfer switch must be used when connecting a portable generator to a wiring system. This ensures your system is connected to either the utility supply or the portable generator, but never both at the same time. Without a transfer switch, the portable generator will backfeed to the utility power lines, creating a high-voltage hazard for our line technicians.

Be sure you purchase a safety-approved switch that's been certified from an organization such as the Canadian Standards Association (CSA). If you are not familiar with the certification organization on the label, call your local SaskPower Electrical Inspections or your electrical contractor.

The transfer switch must equal or exceed the output of your generator. Two types of transfer switches are available:

- A two-pole transfer switch is used if the generator was manufactured with the "neutral floating."
- A three-pole transfer switch is used if the generator was manufactured with the "neutral bonded to the frame."

### Typical household appliance power requirements

	Start-up watts	Running watts
Refrigerator	2500	800
Furnace	1400	700
Microwave	–	750
Radio	–	750
Coffee maker	–	100
Well pump	2000	750
Sump pump	1400	750

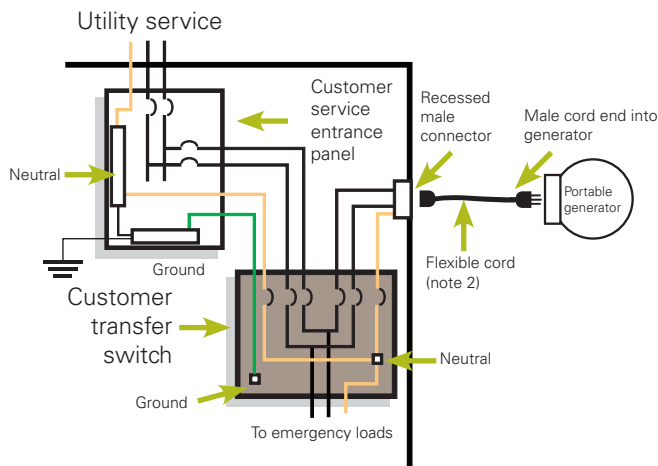
**A SaskPower electrical permit is required to install a portable generator.**

These diagrams show typical installation configurations. For other installation configurations, contact a licensed electrical contractor or a SaskPower Gas and Electrical Inspections office.

### Residential Service

Customer transfer switch required.

Example with neutral bonded to frame  
(note 3 & 4)



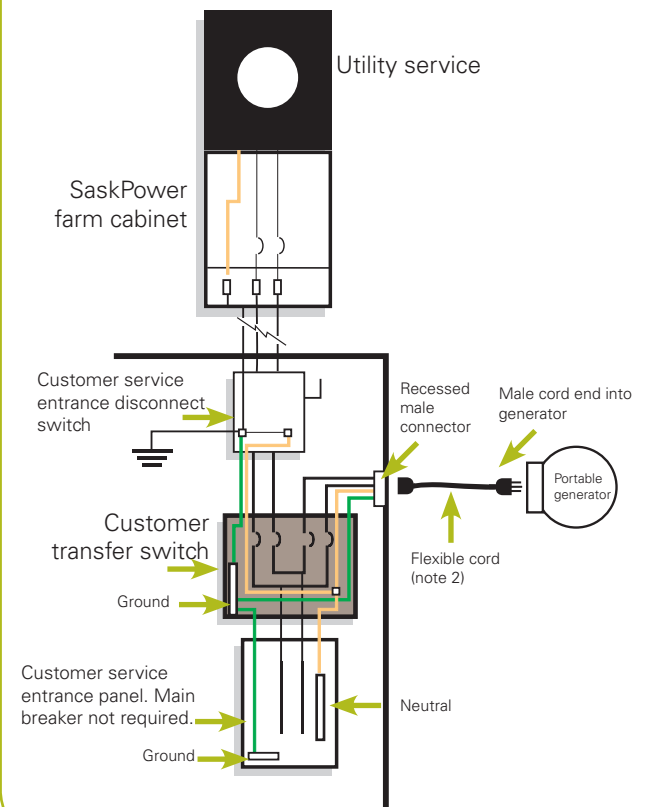
### Notes

- 1) Rewiring or tampering with a generator unit voids CSA certification.
- 2) Conductors must be sized to match the maximum output of the generator.
- 3) Follow generator manufacturer's installation, grounding and operation instructions.
- 4) A three-pole transfer switch must be used when the generator neutral is bonded to the frame.
- 5) Permission is required from your local SaskPower district office to install this connector on a transformer pole.

### Farm Service

Using customer transfer switch.

Example with neutral floating  
(note 3)



### Farm Service

Using SaskPower transfer switch.

Grounding / bonding  
(note 3)

