



## A Guide to Stand-by Generators

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Some Prince Edward Island residents have purchased or are thinking about purchasing stand-by generators. This brochure was prepared to address safety concerns and answer commonly asked questions about generators.

When properly installed and operated, a stand-by generator can provide an adequate supply of short-term electricity. If not properly installed and operated, stand-by generators pose a potential safety hazard to both customers and lineworkers.

### **Can I install a stand-by generator myself?**

No! The Prince Edward Island Electrical Inspection Act requires that a licensed electrician install stand-by generators. Electrical codes require that a stand-by generator connected to your home must be controlled by a transfer switch. A licensed electrician must do this for you to ensure it is properly installed. A wiring permit is required to do this work. A transfer switch ensures your power is only delivered from either the utility supply or from the generator – **never from both at the same time.**

An approved installation by a qualified electrician will prevent your generator from becoming a fire hazard when the utility power is restored, and it also prevents Maritime Electric lineworkers from being electrocuted when service is restored to your home.

### **What other safety issues should I keep in mind?**

- Never operate a stand-by generator in your house, basement or garage. The exhaust fumes are deadly. Always run a generator outside in a well ventilated area.
- Do not cover an operating generator. The internal combustion engine of a generator requires unrestricted air flow around it to function properly.

- Never expose a generator to rain or moisture. Like all electrical devices, it must remain dry at all times.
- Never fuel a generator while it is running. This could start a fire.
- Keep children away from generators at all times.
- Many of the engine's parts become hot during operation. Severe burns may result if touched.

### **How much fuel could I expect to burn?**

An efficient 3,500-watt gasoline generator typically consumes 2.2 litres of fuel per hour at full load. That means you would need about 20 litres of fuel to operate a generator for 9 hours. Remember, when there is an electricity service interruption, gas stations may be closed if they require electricity to operate. A generator operating for only a few hours will still use a considerable amount of fuel.

### **What size generator do I need?**

The size of the stand-by generator you need depends on your energy requirements. Most emergency power needs can be satisfied with a stand-by generator of 2,500 to 5,000 watts.

A licensed electrician will be able to answer specific questions on which generator is best suited for your needs.



## How much power do different appliances require?

The following chart shows the approximate power requirements of typical household appliances.

“Start-up” is the momentary large wattage required to engage an electric motor. “Running Watts” is the normal operating level.

Appliance	Start-Up Watts	Running Watts
Sump Pump	1,400	750
Washing Machine	2,000	500
Furnace Blower	1,400	350
Well Pump	2,000	750
Refrigerator	2,500	500
Oil Burner	3,100	260
TV	-	200
Microwave	-	1,000
Radio	-	30
2-Slice Toaster	-	1,150
Space Heater (portable)	-	1,500
Water Heater (40 gallon)	-	3,000

## Where can I find out more about stand-by generators?

For more information on the proper installation of stand-by generators, including the proper size and type of generator you will need, contact your local electrical inspector or licensed electrical contractor.

## Contact Us

If you are interested in having a Maritime Electric employee deliver an Electrical Safety in the Workplace presentation please contact us.

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