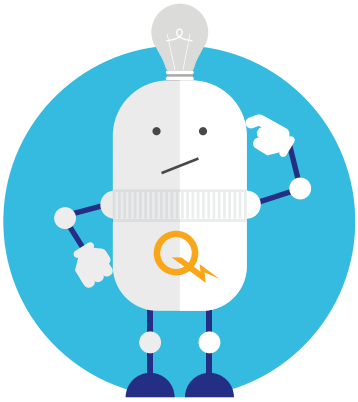
The path electricity takes

Ever wondered where electricity comes from, and how it gets to your home?

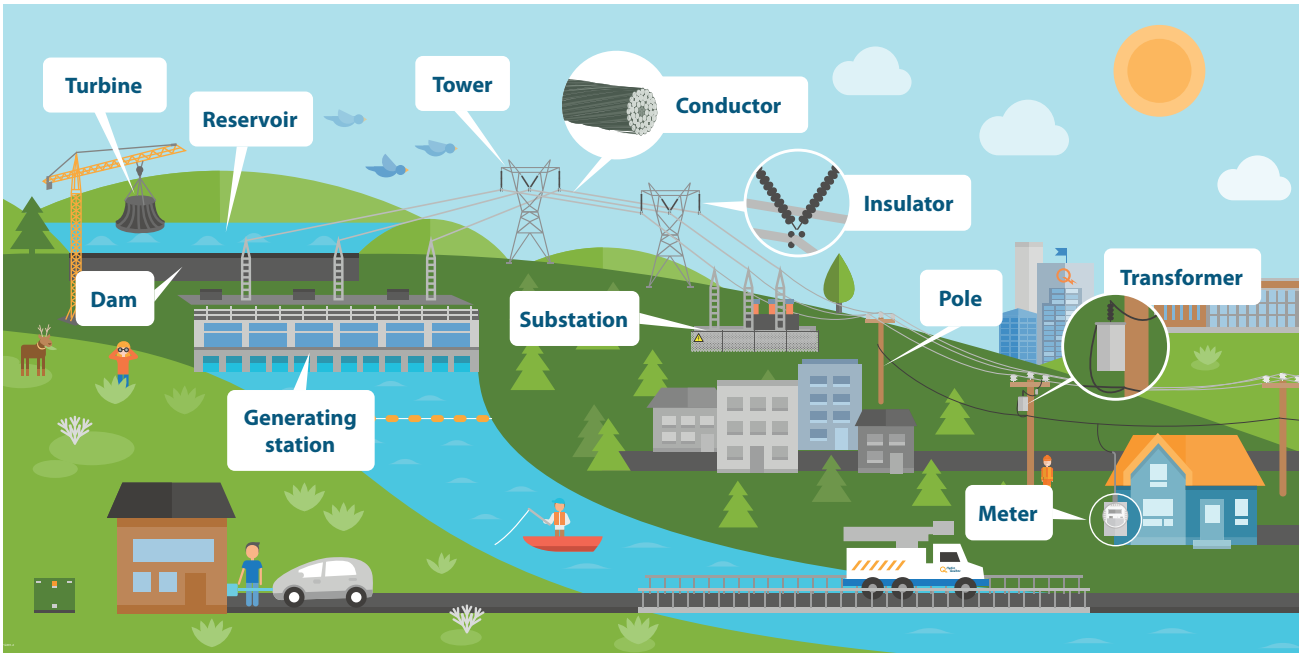
In Québec, electricity is generated in hydroelectric generating stations using the power of water. Generating stations are often located far from cities and from where the electricity is used, which means that the electricity needs to travel a long way before it gets to your home.

Learn all about the path electricity takes and test your new knowledge with our little quiz!



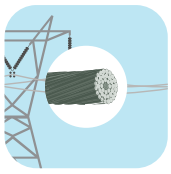
Quiz

Take a look at the picture below and help HYDROBOT identify the equipment involved in the path of electricity from the power station to our homes. Now you're ready to answer the following questions.

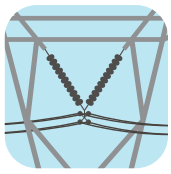


1 Match each picture with the corresponding equipment.

Reservoir **Turbine** **Pole** **Conductor** **Insulator** **Substation**





2 Who am I?

a. I am a type of wall built across a river or stream to hold back the water and create an artificial lake.

Answer: _____

b. I am a metallic structure that supports high-voltage power lines.

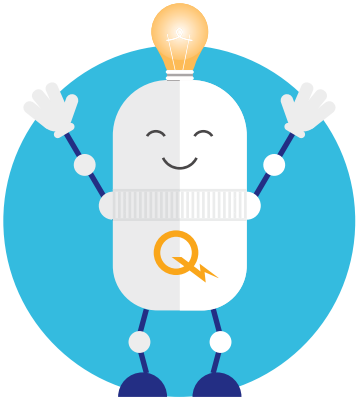
Answer: _____

c. I am used to measure how much electricity a home consumes.

Answer: _____

d. I am a plant where electricity is generated.

Answer: _____



3 True or false?

a. People aren't allowed to go swimming near a hydroelectric generating station.

◯ True ◯ False

b. When there's an outage, it means the generating station is broken.

◯ True ◯ False

4 Find the electric car in the picture.

How do you know it's an electric car?

Answer: _____

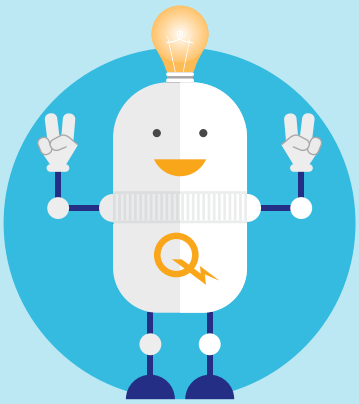
5 What does the symbol on the substation fence mean?

Answer: _____

6 What do you think the word *hydro* means?

Hint: the answer is on *page 12 of the Electricity from the power station to the home*[1] document.

Answer: _____



Want to learn more?

Read our *Les Débrouillards* ***article about hydropower, a renewable energy thanks to the water cycle***[2] [In French only].

You can also visit the ***Understanding Electricity***[3] site.

1. http://www.hydroquebec.com/teachers/pdf/doc-electricity-from-the-power-station-to-the-home.pdf (PDF – 16.4 MB)
2. https://www.hydroquebec.com/data/jeunesse/pdf/publireportage-lesdebrouillards-hydroelectricite-energie-renouvelable.pdf (PDF – 347 Ko)
2. http://www.hydroquebec.com/learning/

Answers

1

Reservoir — Turbine — Pole — Conductor — Isolator — Substation

2

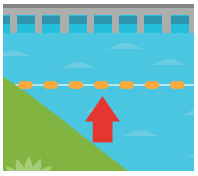
What am I?

a. A dam **b.** A tower **c.** A meter **d.** A generating station

3

True or false?

a. True. Never go swimming near a hydroelectric generating station. Eddies, which can be visible or invisible, can drag you under. That's why Hydro-Québec uses signs, fences and safety buoys. Never cross them, whether you're swimming or in a boat.



a. False. Most outages are caused by vegetation like a tree branch that falls on an electrical conductor. If the power line is broken, it must be repaired by a line crew. Read the Les Débrouillards article[4] [In French only] to learn more about what line workers do.

4

You can tell it's an electric car because the owner has plugged it into an outdoor electrical outlet.

5

This symbol means that people cannot go beyond the fence. It is very dangerous to go near the substation because of the large quantities of electricity.

6

Hydro means "water" in Greek. It is often used as a prefix, which means that it is placed in front of another word to create a word associated with water. For example, *hydroplane*, *hydrography* and, or course, *Hydro-Québec*!

4. http://www.hydroquebec.com/professeurs/pdf/debrouillards-2017-09-01.pdf (PDF – 613 Ko)