



Quiz - Cycle 2

The DecaWatt Challenge





Question 1

How many hydroelectric generating stations are there at Hydro-Québec?

- A) 11
- B) 41
- C) 61
- D) 81



C

61 hydroelectric generating stations



Question 2

How many 40-watt lightbulbs could an electric eel light up?

- A) 1
- B) 2
- C) 10
- D) 12



D

12 40-watt lightbulbs



Question 3

How can you extend a laptop's lifespan?

- A) Turn it off when you're not using it
- B) Leave it in standby mode all the time
- C) Turn it off every second day
- D) Bring it everywhere with you, even in the shower, to make sure nobody goes through your files



A

Turn it off when you're not using it

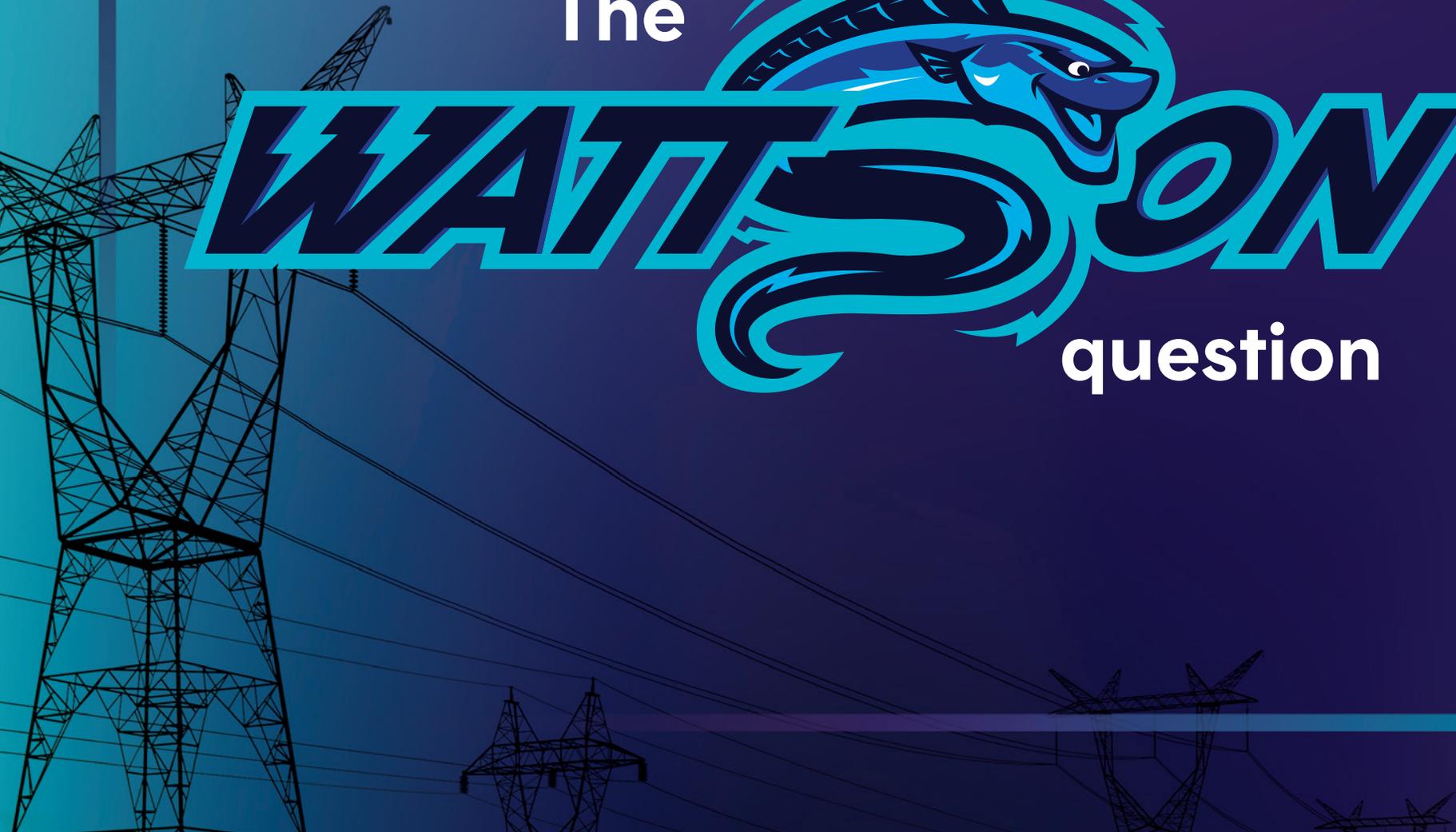
You can save electricity by turning off your computer when not using it. Turning a computer on and off has no impact on its lifespan.

The



WATTSON

question





Question 4

Hydro-Québec also produces solar power at two generating stations. What is the total surface area of the two stations?

- A)** The equivalent of 18 football fields
- B)** The equivalent of 38 football fields
- C)** The equivalent of 58 football fields
- D)** The equivalent of 78 football fields



B

The equivalent of 38 football fields

Both generating stations are in the Montérégie region.



Question 5

What is the best technique for saving hot water when doing dishes?

- A) Washing the dishes by hand while letting the water run
- B) Rinsing and soaping up the dishes before putting them in the dishwasher
- C) Running a recent-model dishwasher less often but only when it's full
- D) Running a partly filled dishwasher on a longer cycle for cleaner dishes



C

**Running a recent-model dishwasher
less often but only when it's full**

Try to run your dishwasher only when it is full, using the short cycle. It's more economical to let the dishes air-dry than to use the heat dry option.



Question 6

What percentage of a household's yearly electricity bill does a swimming pool account for (including heating)?

- A) 10%
- B) 20%
- C) 25%
- D) 30%



B

20%

That's right, up to 20% of the yearly total! Over the course of a year, a swimming pool uses as much energy as all household appliances combined. To reduce your power consumption, use a solar pool cover and a timer with your filtration pump.



Question 7

What percentage of a home's heat is lost through warm air leaks and cold air infiltrations?

- A) 3%
- B) 10%
- C) 20%
- D) 25%



D

25%

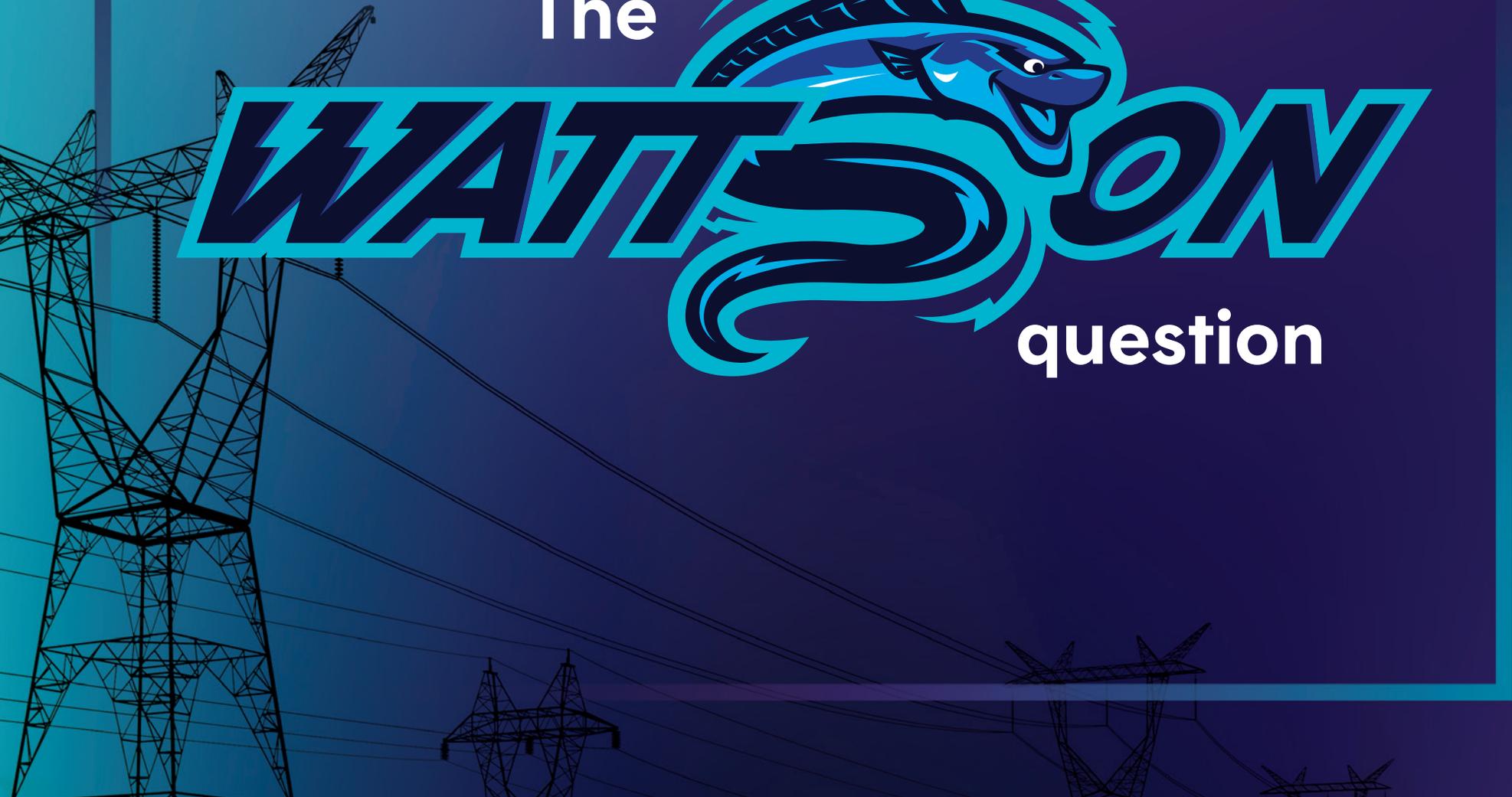
One quarter of a home's heat escapes through the building envelope, which includes the roof, walls, basement floor, windows and window frames. That's why it's important to identify the sources of any cold air infiltrations and caulk around door and window frames, if necessary.

The



WATTSON

question





Question 8

What percentage of the oven's heat is lost if you open the door during cooking?

- A) 5%
- B) 10%
- C) 20%
- D) 30%



C

20%

Even if you open the door for only a few seconds,
a lot of heat escapes.



Question 9

How much can you save on your electricity bill by lowering your home's temperature by 1°C (e.g., from 23°C to 22°C) all winter long?

- A) Between 1% and 3%
- B) Between 3% and 5%
- C) Between 5% and 7%
- D) 8% or more



C

Between 5% and 7%

A difference of just one degree can save you up to 7% on your bill, which can really add up.



Question 10

Heating is one of a home's biggest energy expenses.
What percentage of the total electricity bill does
heating represent (on average)?

- A) 30%
- B) 50%
- C) 70%
- D) 85%



B

50%

Heating alone accounts for about 50% of the power consumption of an electrically heated home.



Question 11

To heat a room as quickly as possible, at how many degrees more than your target temperature should you set the thermostat?

- A) 1°C
- B) 2°C
- C) 5°C
- D) None of the above



D

None of the above

The thermostat setting has no bearing on how fast a room heats up. What's more, by setting the temperature too high, you run the risk of overheating the room needlessly.



Question 12

**A faucet leaks one drop every second.
How many litres of water does it waste in a day?**

- A) 2 litres**
- B) 14 litres**
- C) 20 litres**
- D) 27 litres**



D

27 litres of water

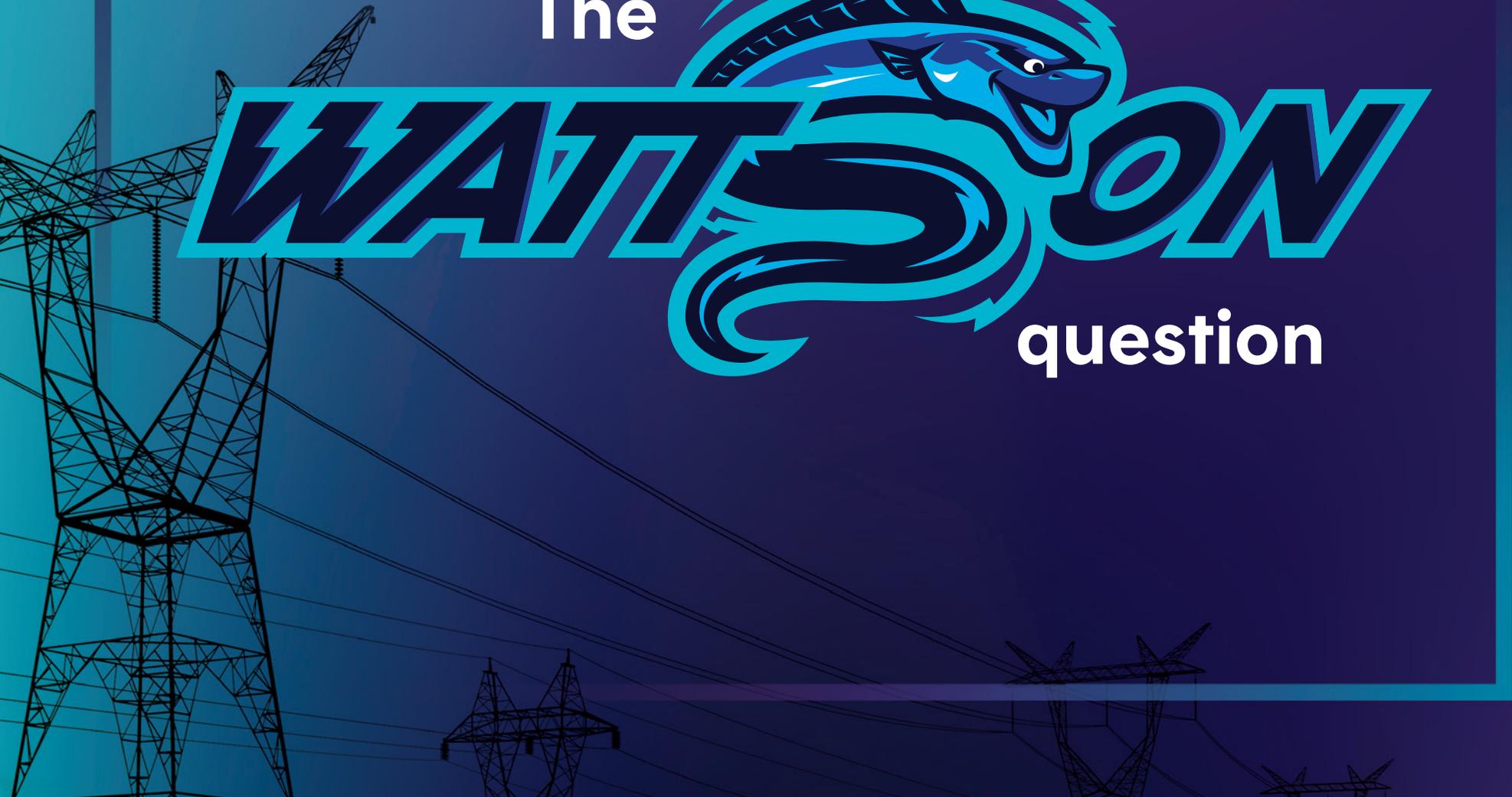
At that pace, you could fill a bathtub in five days!
It's important to repair any leaking faucets promptly,
especially if they're leaking hot water!

The



WATTSON

question





Question 13

Before turning on an air conditioner, it's important to:

- A) Close the windows
- B) Open one window a little
- C) Open one window
- D) Open two windows



A

Close the windows

Because opening a window could let even more hot air in, it's best to leave the windows shut and let the air conditioner do its job!



Question 14

How much more water does it take to have a bath instead of an eight-minute shower?

- A) 25%
- B) 50%
- C) 75%
- D) 100%



B

50%

Having a bath requires twice as much hot water
as taking an eight-minute shower.



Question 15

What kind of lighting is the most economical for studying?

- A)** A ceiling light with three halogen bulbs
- B)** A reading lamp with an LED bulb
- C)** A floor lamp with a halogen bulb
- D)** A flashlight that uses three D batteries



B

A reading lamp with an LED bulb



Question 16

To dry clothing faster while saving as much energy as possible, you should:

- A) Use a blow dryer
- B) Use a dryer and choose the cycle with the highest temperature
- C) Use a dryer and choose a cycle with a set length
- D) Use a dryer and choose the cycle with the lowest temperature



C

Use a dryer and choose a cycle with a set length

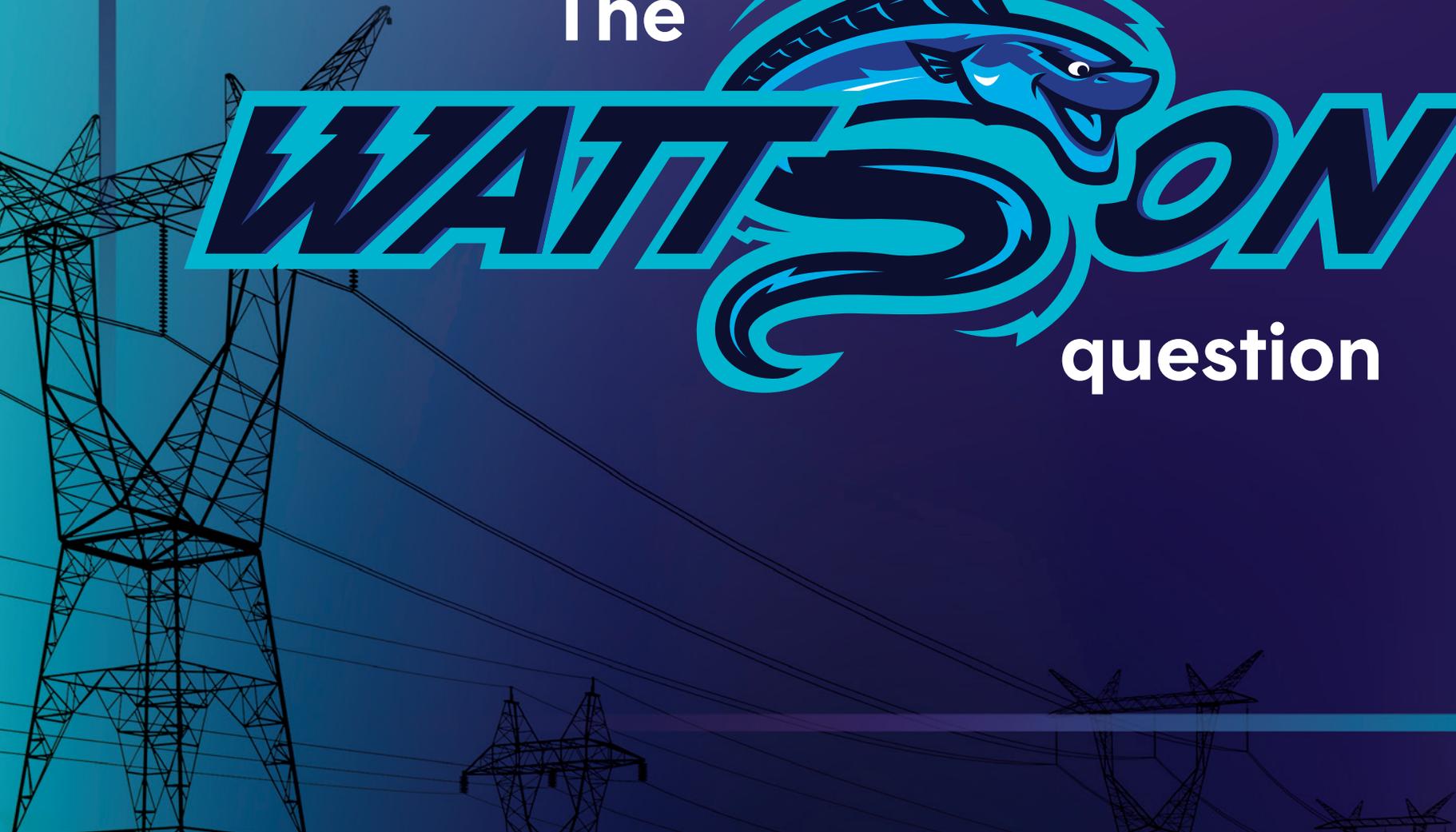
It's no good trying to rush things. Using a dryer at the highest temperature setting only uses more energy and burns your clothing fibres.

The



WATTSON

question





Question 17

When you leave a room for a short time,
it's more economical to:

- A) Leave the lights on
- B) Turn off the lights
- C) Dim the lights
- D) Leave the door open



B

Turn off the lights, even if you just leave for a moment.

After all, the cheapest kilowatt
is the one you don't use!



Question 18

If you use a blow dryer once a week for 10 minutes, how many kilowatthours of electricity does it add up to in a year?

- A) 2 kWh
- B) 5 kWh
- C) 10 kWh
- D) 13 kWh



D

13 kWh a year



Question 19

What temperature should you set your home's water heater to?

- A) 50°C
- B) 55°C
- C) 60°C
- D) 65°C



C

60°C

This temperature setting prevents any risk of burns but is still high enough to kill Legionella, the bacteria that cause Legionnaires' disease, a rare form of pneumonia. The bacteria grow in water heaters kept at temperatures that are too low.



Question 20

If you use a recent-model dishwasher 100 times in a year, what will be the total energy cost (including for the hot water)?

- A) 100 kWh a year, or about \$9**
- B) 150 kWh a year, or about \$13.50**
- C) 200 kWh a year, or about \$18**
- D) 250 kWh a year, or about \$22.50**



B

150 kWh, or about \$13.50



Question 21

If you toast two slices of bread for two minutes every morning, how many kilowatthours does that add up to over a year?

- A) 2 kWh**
- B) 5 kWh**
- C) 10 kWh**
- D) 25 kWh**



C

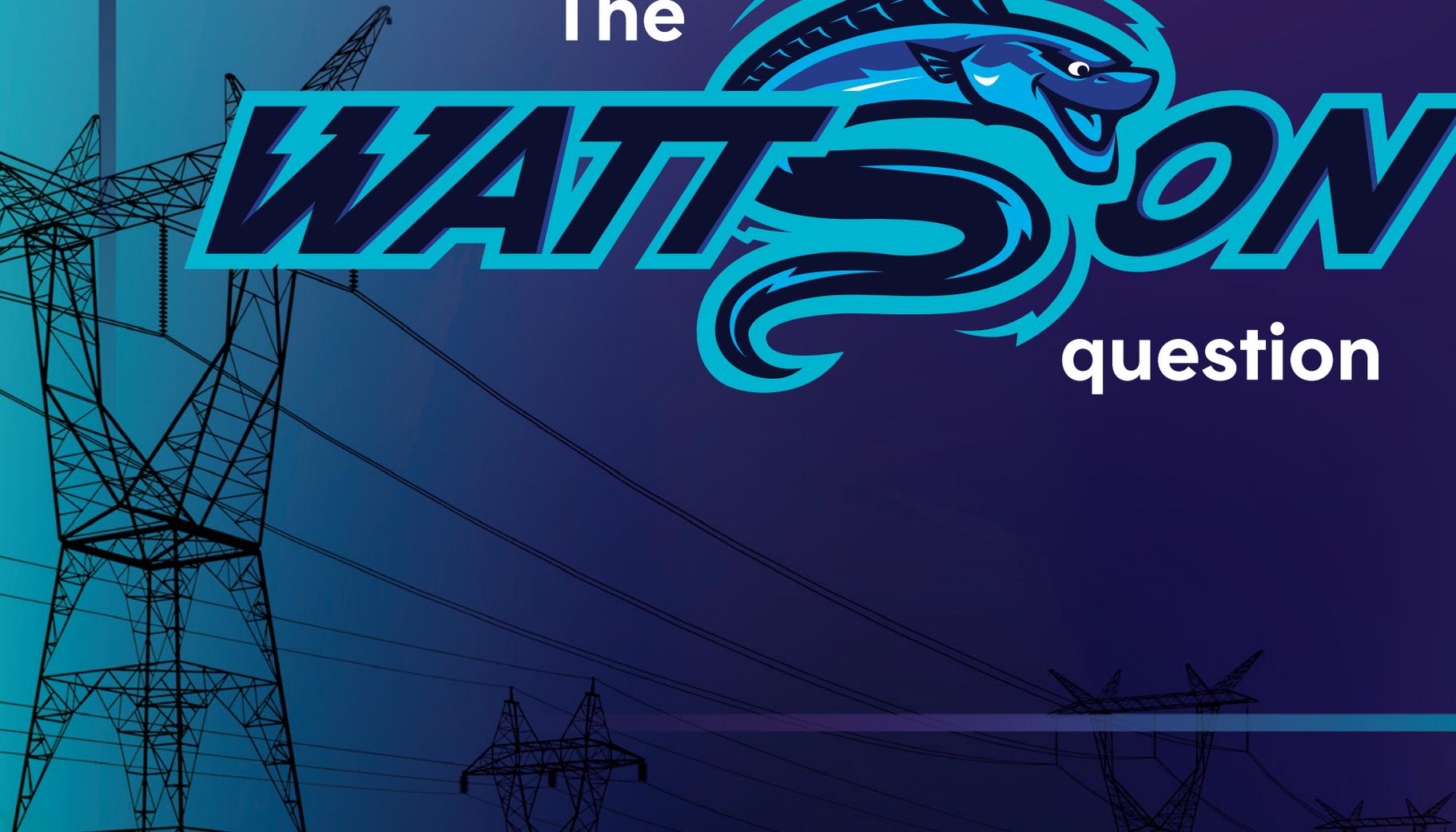
10 kWh a year

The



WATTSON

question





Question 22

The La Grande complex supplies power to a significant percentage of the Québec population, about:

- A) 30% of Quebecers
- B) 40% of Quebecers
- C) 50% of Quebecers
- D) 60% of Quebecers



C

About 50% of Quebecers.

La Grande is the largest hydroelectric complex in North America.



Question 23

What is the longest span between two transmission towers in Hydro-Québec's power system?

- A) 200 metres
- B) 550 metres
- C) 1,100 metres
- D) 2,000 metres



D

2,000 metres



Question 24

Which of the following devices uses the most electricity (for the same usage time)?

- A) Air conditioner
- B) Refrigerator
- C) Television (recent model)
- D) Chain of 100 LED Christmas lights



A

Air conditioner

An air conditioner is the most energy-intensive household appliance, by far! The average air conditioner uses much more energy than most refrigerators and televisions over the same amount of time.



Question 25

Which of the following jobs is not available at Hydro-Québec?

- A) Chemist and 3D model designer
- B) Anthropologist and environmental advisor
- C) Florist and astrophysicist
- D) Cyber security specialist and robotics researcher



C

Florist and astrophysicist

Hydro-Québec is one of the province's biggest companies and offers a wide range of jobs in different fields. Its personnel work in dozens of different occupations in various teams, both in our offices and in the field. Their essential expertise enables Hydro-Québec to optimize its activities and run its facilities effectively!

© Hydro-Québec

Direction – Programmes commerciaux,
expertise énergétique et affaires réglementaires

Reproduction authorized with acknowledgement of source.

ISBN: See the Wattson Kit Teacher's Guide

2021G745A-13

This is a translation of the original French text.
Ce document est également diffusé en français.

