

Find the words

O W A G E D Y M R E S E R V O I R S S Z
 A L W K W A T E R P O W E R H C T U I B
 C N O E P E S G H O I R A T N O N L A N
 B A L A N C E A F E L E C T R I C I T Y
 Q L F J D R O W Q U T U R E P N L Z X T
 V O T S U S T A I N A B L E W T E G J N
 X F U N Z I B T L G X I R S A A A R L E
 W U O E K C O T S N E P H J T K N E O M
 E T S I R A D A M B E C K D E E P E D N
 N U M N Q V G F W P W A T U R B I N E O
 E R E S P O N S I B I L I T Y O V X M R
 R E I I K L P G N S F L I N E S P O A I
 D N M V H T S Z D U H A T N Q X G R N V
 U O A U E S N I A G A R A F A L L S D N
 C E D Y G R E N E S S T T A W O L I K E

BALANCE

FISH

ONTARIO

SUN

CLEAN

FUTURE

OUTFLOW

SUSTAINABLE

COAL

GAS

PENSTOCK

TURBINE

DAM

GREEN

RENEW

VOLTS

DEEP

INTAKE

RESERVOIR

WATER

DEMAND

KILOWATTS

RESPONSIBILITY

WATERPOWER

DROP

LINES

RIVER

WIND

ELECTRICITY

MEGAWATT

RUN

ENERGY

NIAGARA FALLS

SIR ADAM BECK

ENVIRONMENT

OIL

STORE

Word scramble

Unscramble these waterpower related words.

(Hint: all the words can be found in the find-a-word list above)

I L C E R T Y E C I T _____

N U T E I B R _____

E U S L B S A N I T A _____

G A N I R A A L S F L A _____

Did you know?

1. Sir Adam Beck generating station in Niagara Falls is one of the world's largest sources of energy.
2. Ontario's Waterpower industry has been producing renewable energy for more than 150 years.
3. Until about 50 years ago, waterpower produced all the province's electricity.
4. Today, waterpower meets about one quarter of our provincial needs.
5. There are 200 operating waterpower facilities in Ontario.
6. Waterpower is the only source of energy that can "store" power – in reservoirs.
7. The watt is a unit of power named after James Watt (1736-1819), the Scottish inventor. A watt is a very small unit used to measure electricity.

8. Kilowatt 1,000 watts
 Megawatt 1 million watts
 Gigawatt 1 billion watts (1,000 megawatts)
 Terawatt 1 trillion watts (1 million megawatts)

Source: *Primer on the Technologies of Renewable Energy*

It's a-maze-ing



Black Duck River

Find your way through Ontario, starting at Black Duck River and ending at Niagara Falls.

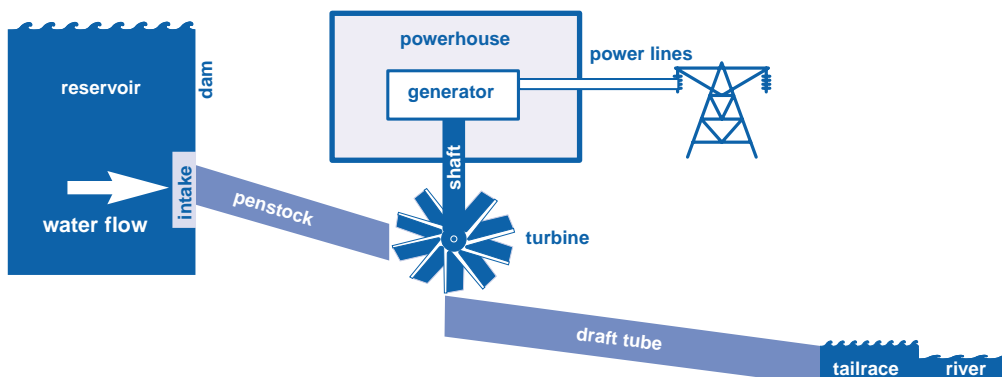


Sponsored by the Ontario Waterpower Association
www.owa.ca

How is electricity created from falling water?

1. In order to convert the potential energy of water to electricity, waterpower facilities use either a natural drop in elevation like at Niagara Falls, or create a drop using dams.
2. The amount of electricity generated depends on the vertical distance the water falls and the volume of water.
3. Water from the river or reservoir behind the dam, flows in through an opening called the intake.
4. From the intake, water flows under pressure through a pipe called the penstock.
5. At the end of the penstock a turbine is located. The force of the water turns the blades of the turbine which then turns the shaft inside the turbine.
6. The shaft inside the turbine is connected to a generator, which generates electricity.
7. Once the water passes the turbine it flows through a draft tube out of the station and back into the river.

How it works



 See diagram.