

ELECTRICITY

Electricity and water don't mix!

Replace cracked, frayed or broken electric cords!

Avoid using octopus outlets!

Stay away from fallen power lines!

Call or click BEFORE you dig!

Transformers are not to be played on!

Electricity can hurt you. Stay safe!

To repair an appliance unplug it first!

Always pull from the plug, not from the wire!

Stay out of electrical substations!

Avoid contact with overhead power lines!

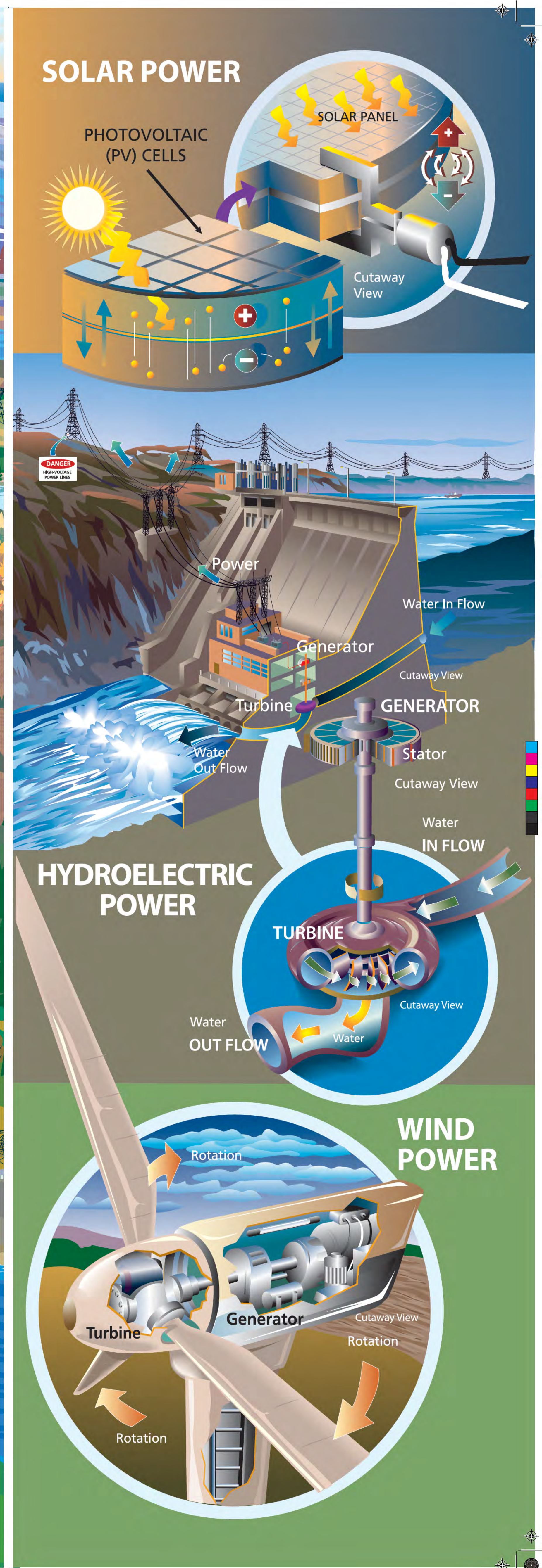
Supported by:
ENMAX
and
Alberta

ALBERTA ELECTRICITY SOURCES
(Installed Capacity, September 2016)

Source	Percentage
Coal	38
Natural Gas	44
Hydro	5
Wind	9
Biomass	3
Other	1

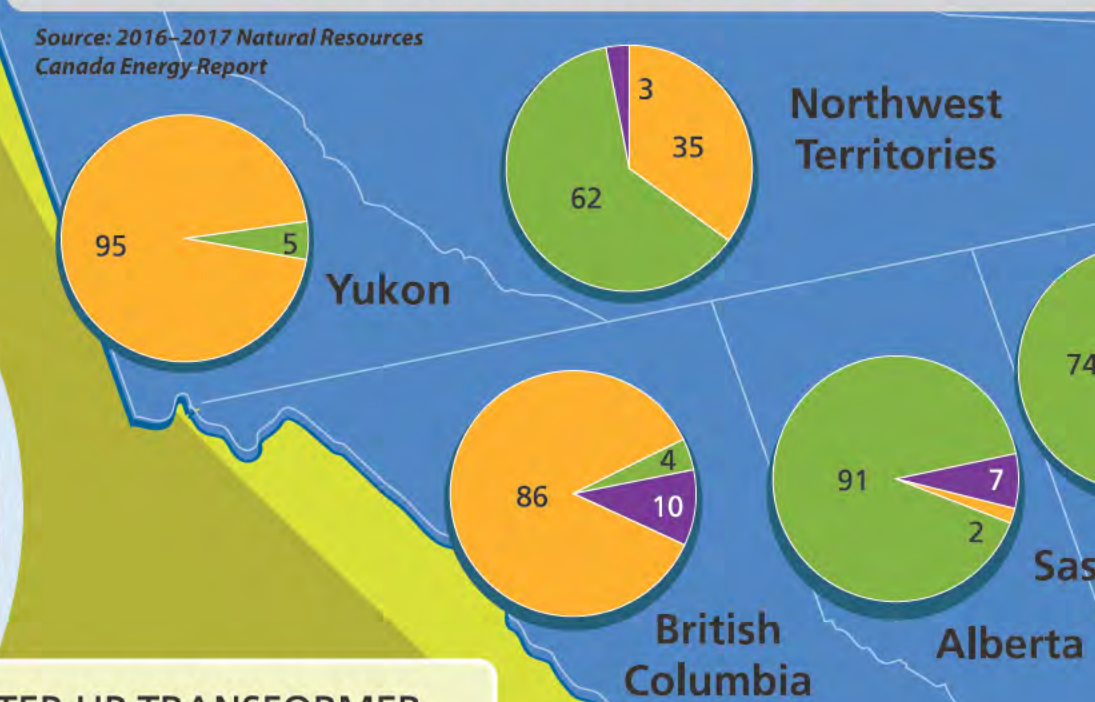
Source: Alberta Utilities Commission

Inside education



ELECTRICITY SOURCE

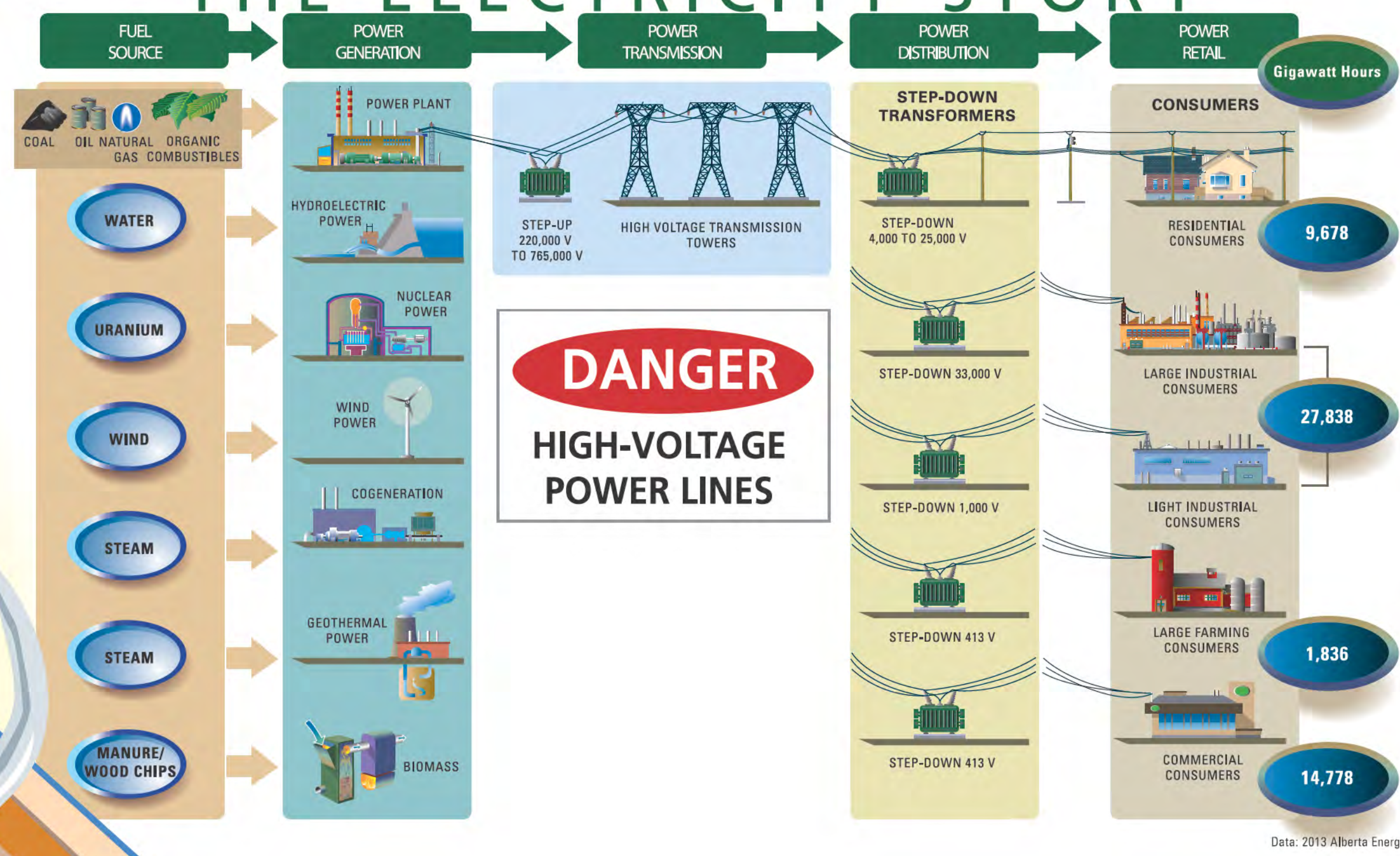
CROSS-COUNTRY ELECTRICITY SNAPSHOT (2016)



ELECTRICITY

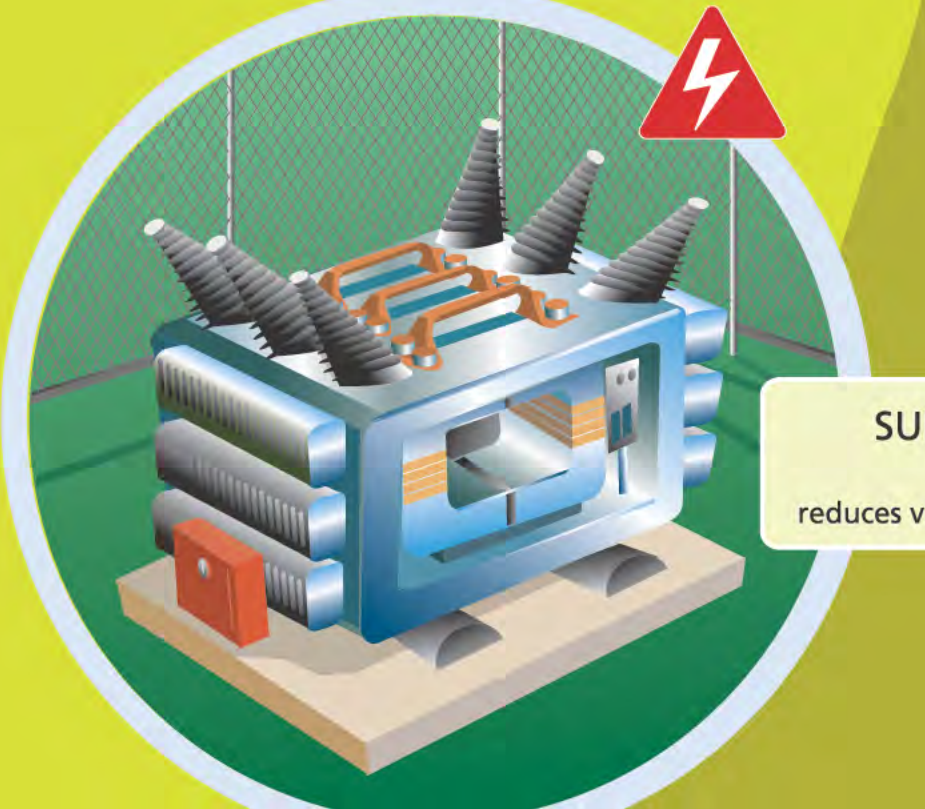
The many uses of electricity in the home.

THE ELECTRICITY STORY



THE PATH OF POWER

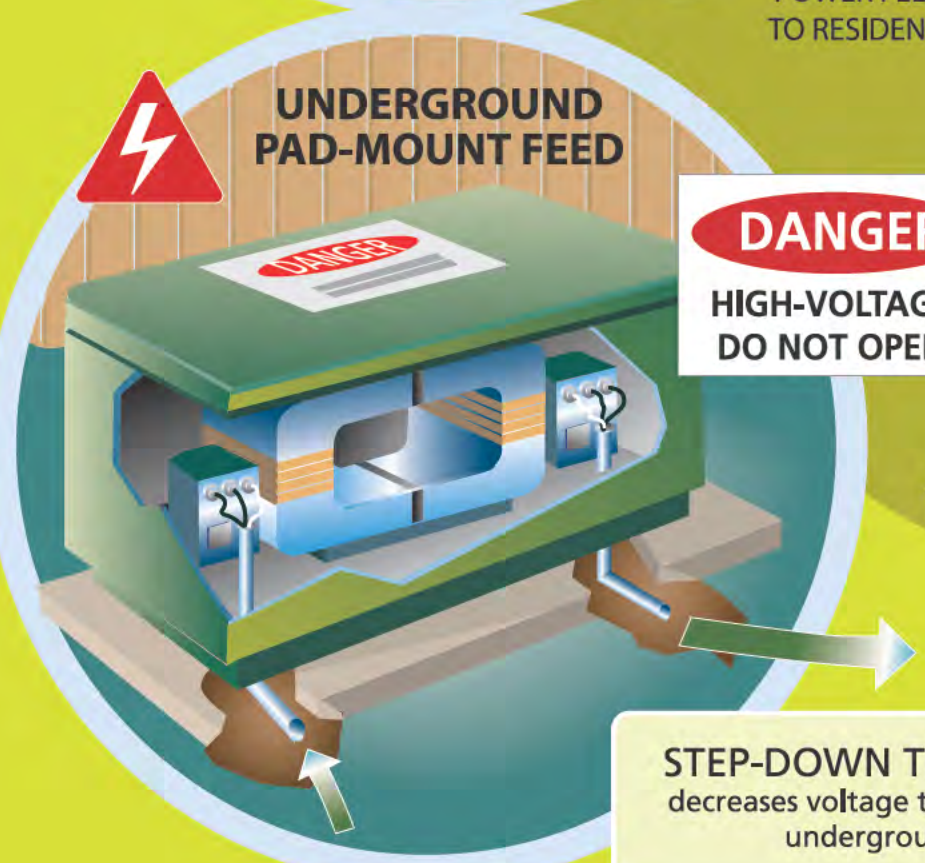
TRANSMISSION LINES various loads up to 765,000 V



SUBSTATION STEP-DOWN TRANSFORMER reduces voltage to approx. 4,000 V to 25,000 V

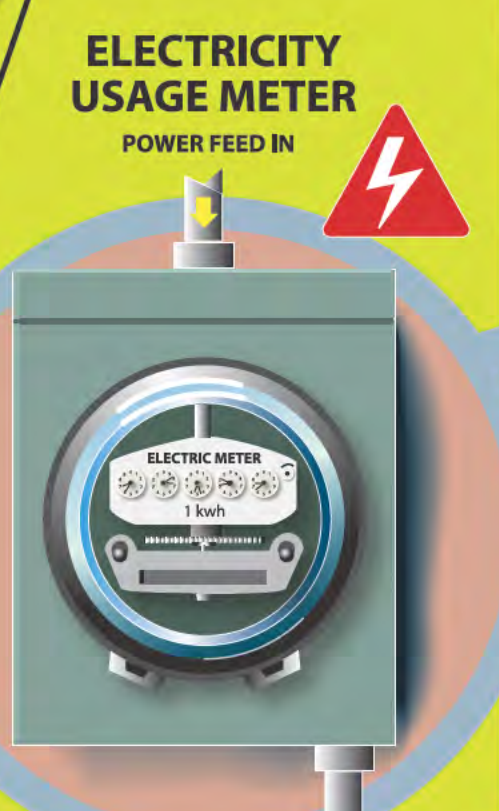


STEP-DOWN TRANSFORMER decreases voltage to 240 V overhead residential service



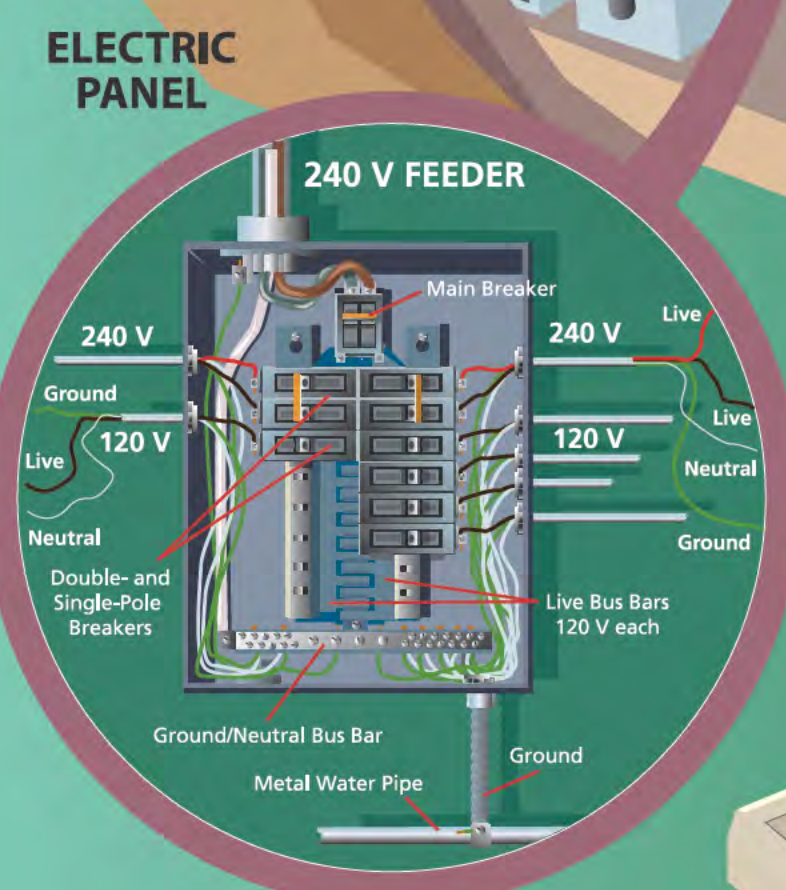
DANGER HIGH-VOLTAGE DO NOT OPEN

STEP-DOWN TRANSFORMER decreases voltage to 240 V residential underground service

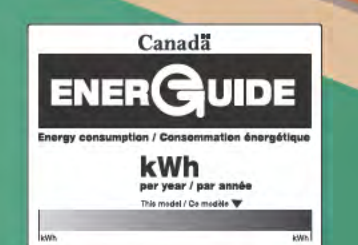


ELECTRICITY USAGE METER POWER FEED IN

POWER FEED TO PANEL



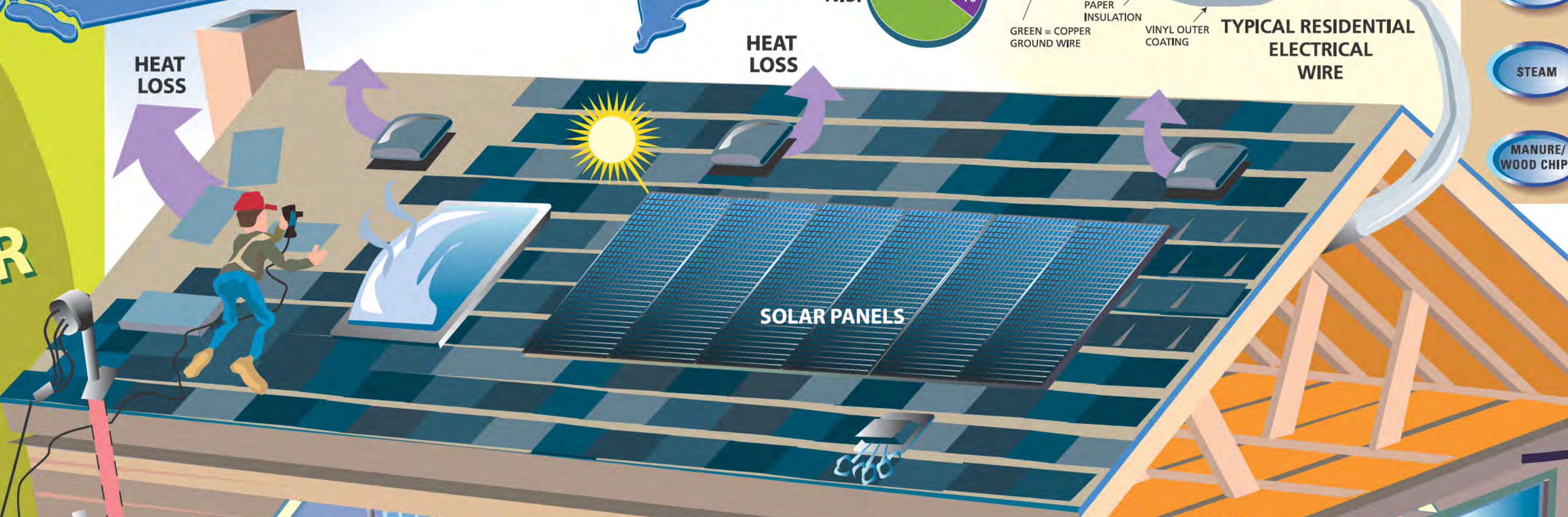
ELECTRIC PANEL



Power bars have built-in safety features! Use a power bar instead of an octopus outlet.

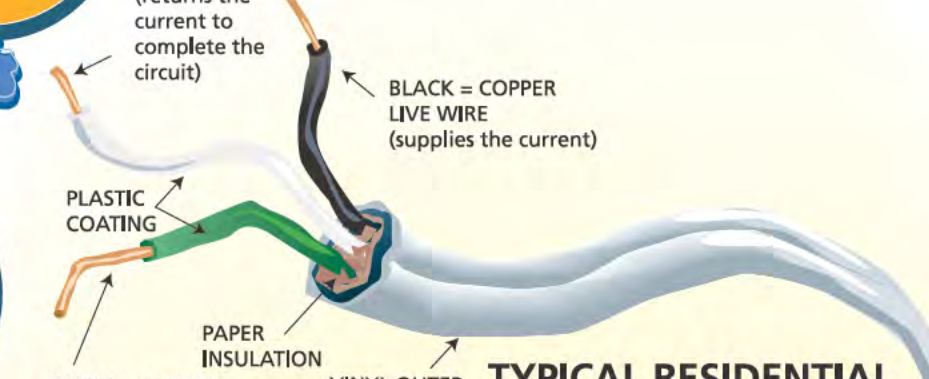
Electricity Transmission

HEAT LOSS



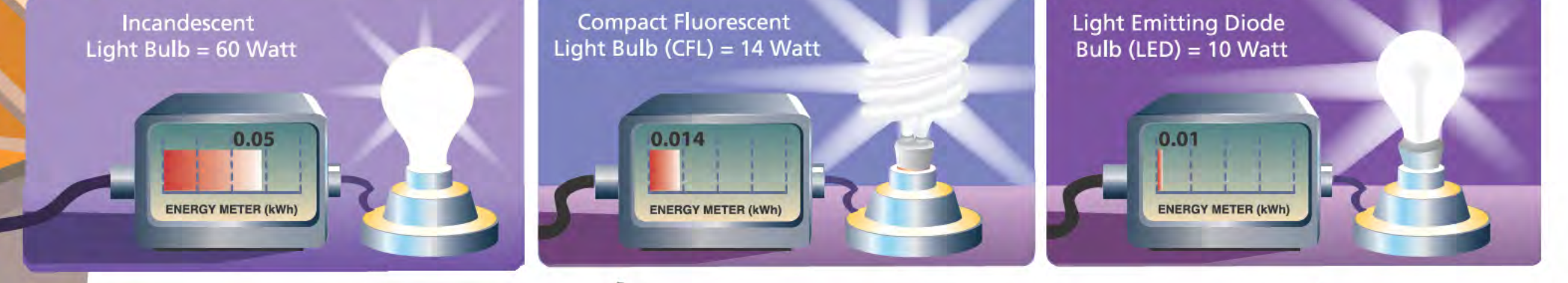
SOLAR PANELS

INSULATION



TYPICAL RESIDENTIAL ELECTRICAL WIRE

ENERGY EFFICIENCY

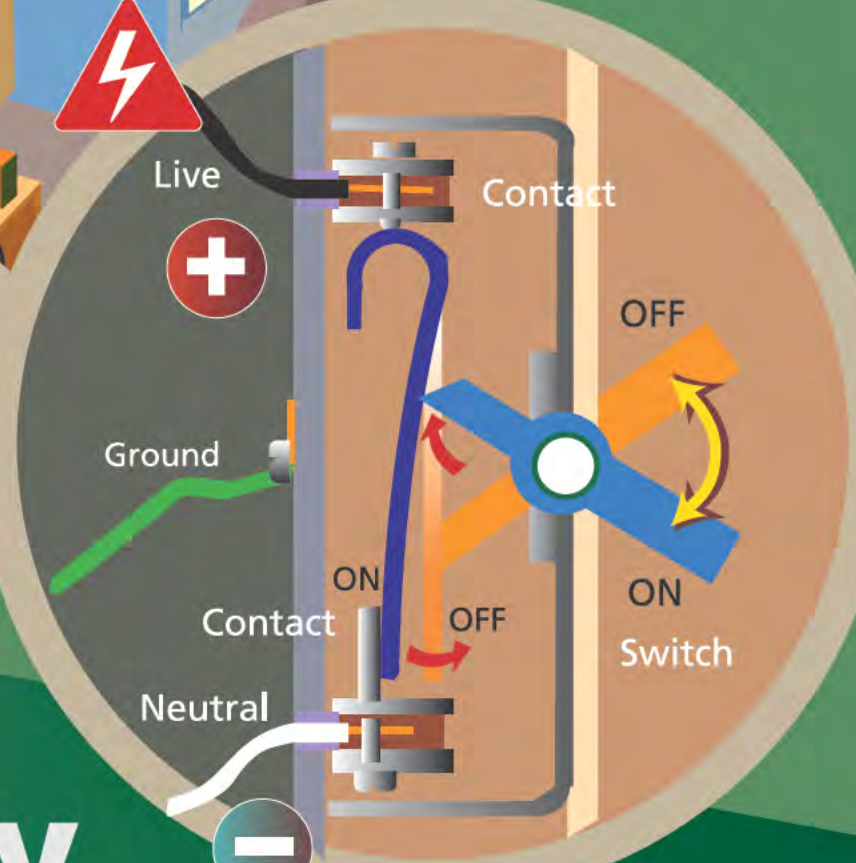


CONSERVE ENERGY

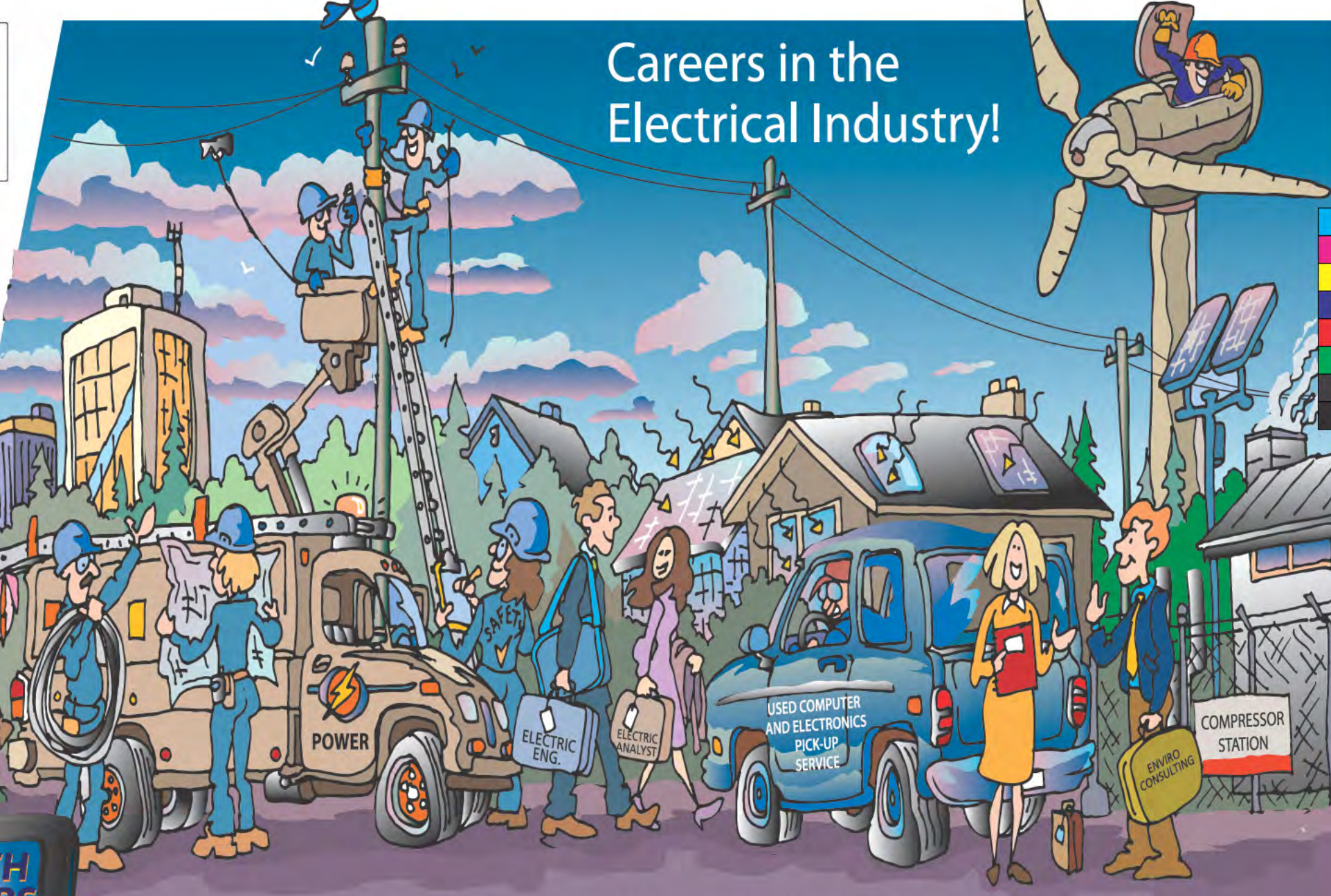
PHANTOM ELECTRICITY LOSS THROUGHOUT HOUSE
Phantom losses come from stand-by electronic items such as televisions, alarm clocks, radios, computers and peripherals, coffee makers, power bars and other plugged-in items.



TYPICAL LIGHT SWITCH

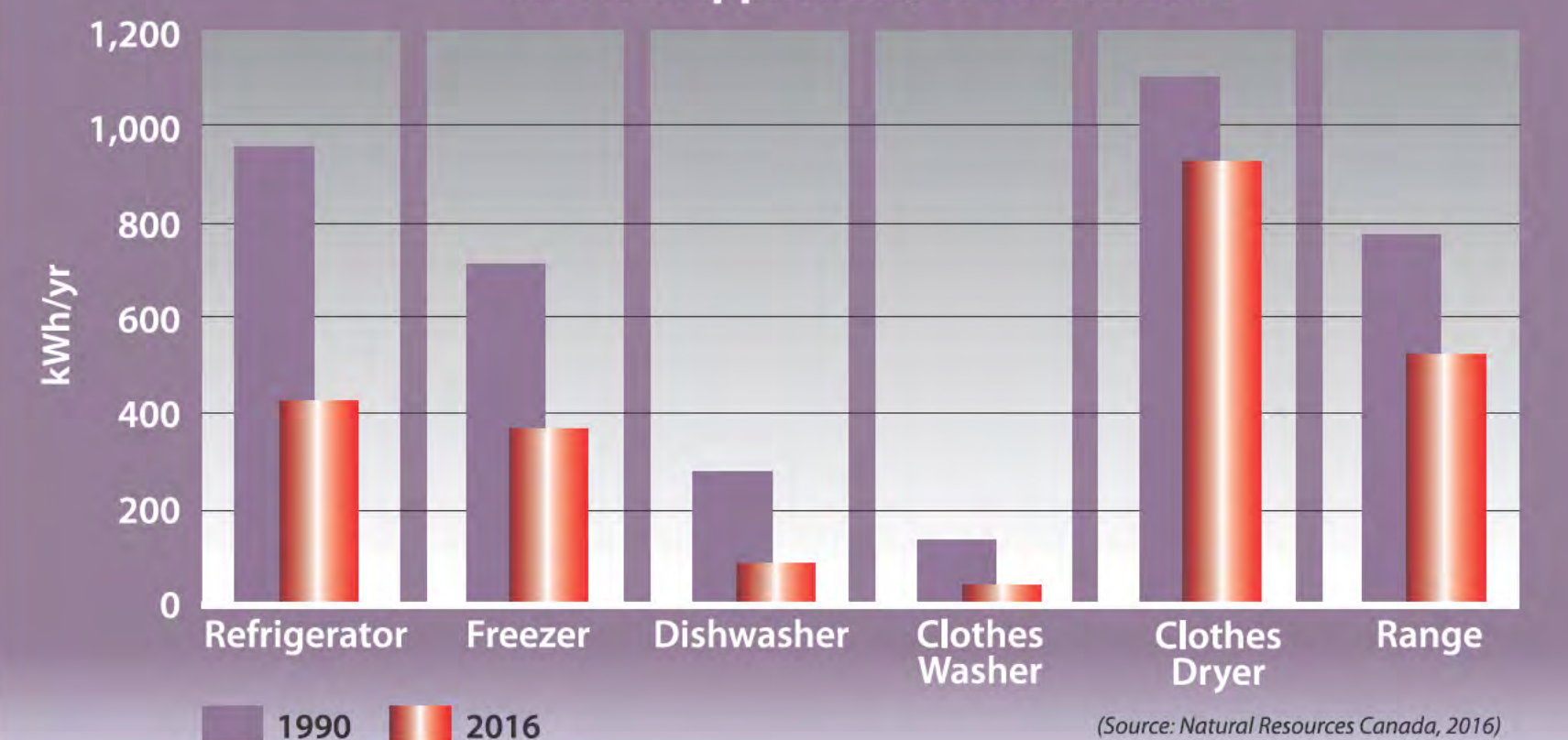


Electricity Consumption



Careers in the Electrical Industry!

Improved Energy Efficiency - Unit Energy Consumption for New Appliances, 1990 and 2016



Supported by:



Teacher's Guide available at www.insideeducation.ca



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