

GREEN POWER

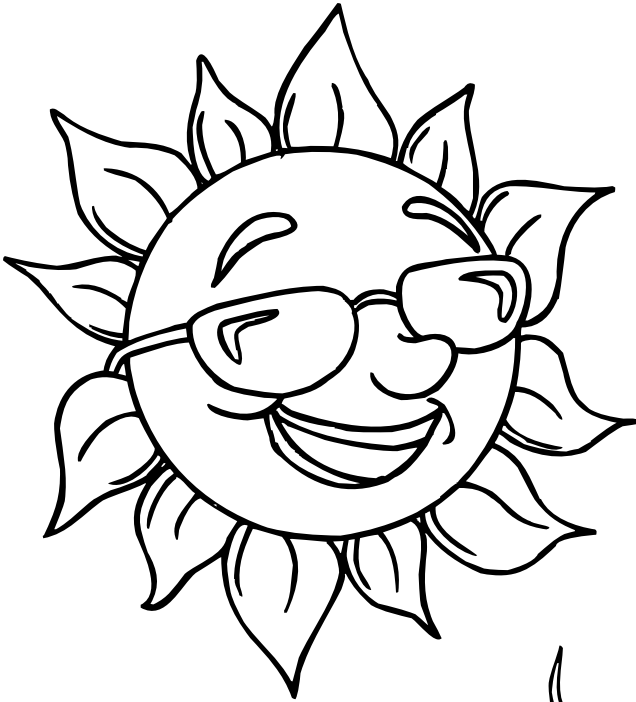
coloring and activity book



Presented by your local power company and TVA Green Power Switch®.

Renewables!

Green power is made from renewable resources like the sun, wind, water and biomass to create electricity.



**Renewable
resources
NEVER
run
out!**



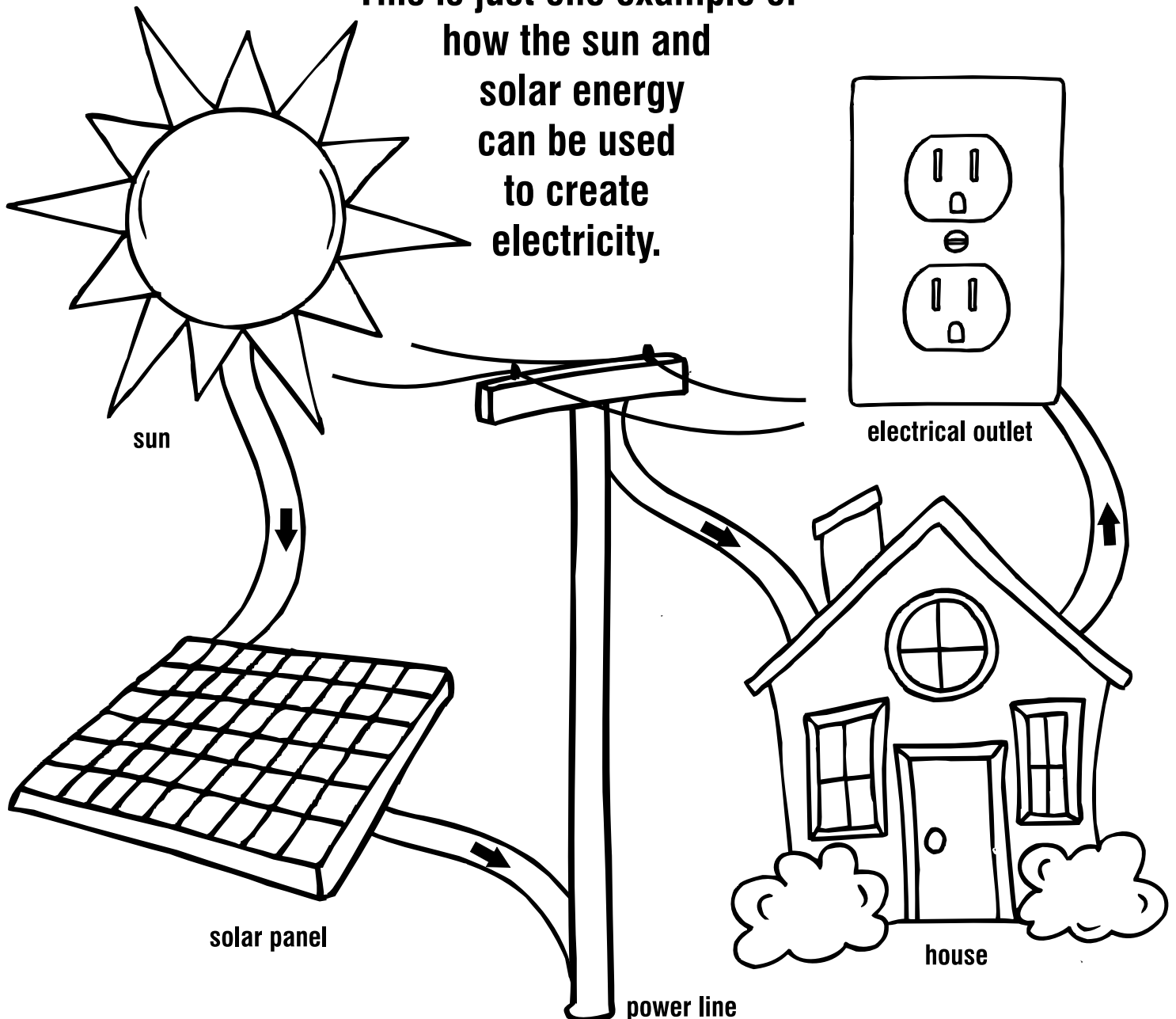
**Learn about
renewable
energy by
coloring and
doing the fun
activities in
this book.**

What is electricity?

Electricity provides the energy we need to do things like watch TV or turn on the lights.

Starting with the sun, follow the arrows as the power flows all the way to the electrical outlet.

This is just one example of how the sun and solar energy can be used to create electricity.

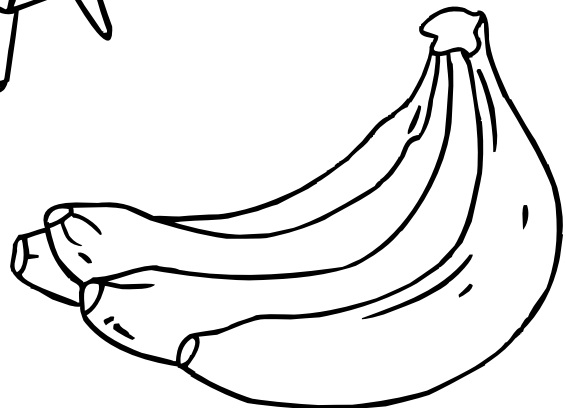
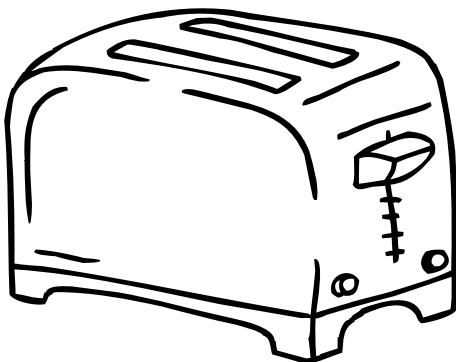
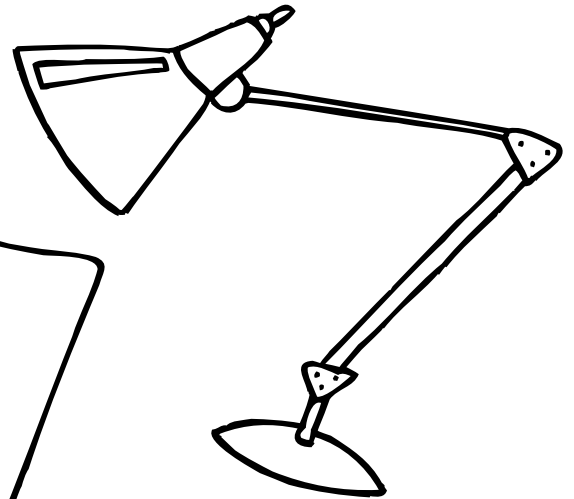
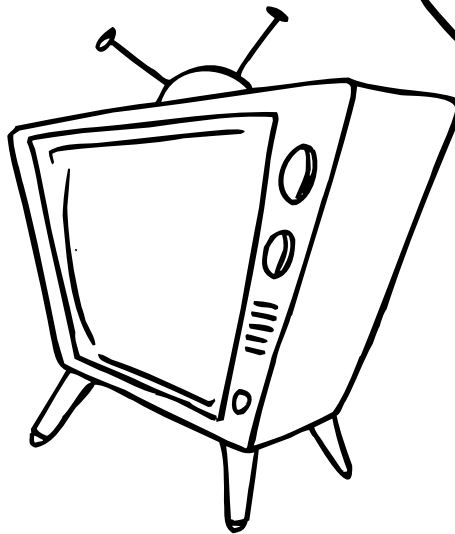


What uses electricity?

**Electricity is the flow of electrical power.
It is one of our most common forms of energy.**

Electricity provides the energy we need to do things
like watch TV or turn on the lights.

Color all the items below, then circle
the items that require electricity.



How is electricity made?

Electricity is made from natural resources like coal, oil, natural gas, uranium, water, wind, biomass and sunlight.

See if you can find all of the energy related words in the word bank in the word search below!

Word Bank

SUN
WIND
GARBAGE
BIOMASS
WATER
ENERGY
RENEWABLE
ELECTRICITY
COAL
NATURAL GAS
OIL
NUCLEAR PLANT
FOSSIL PLANT

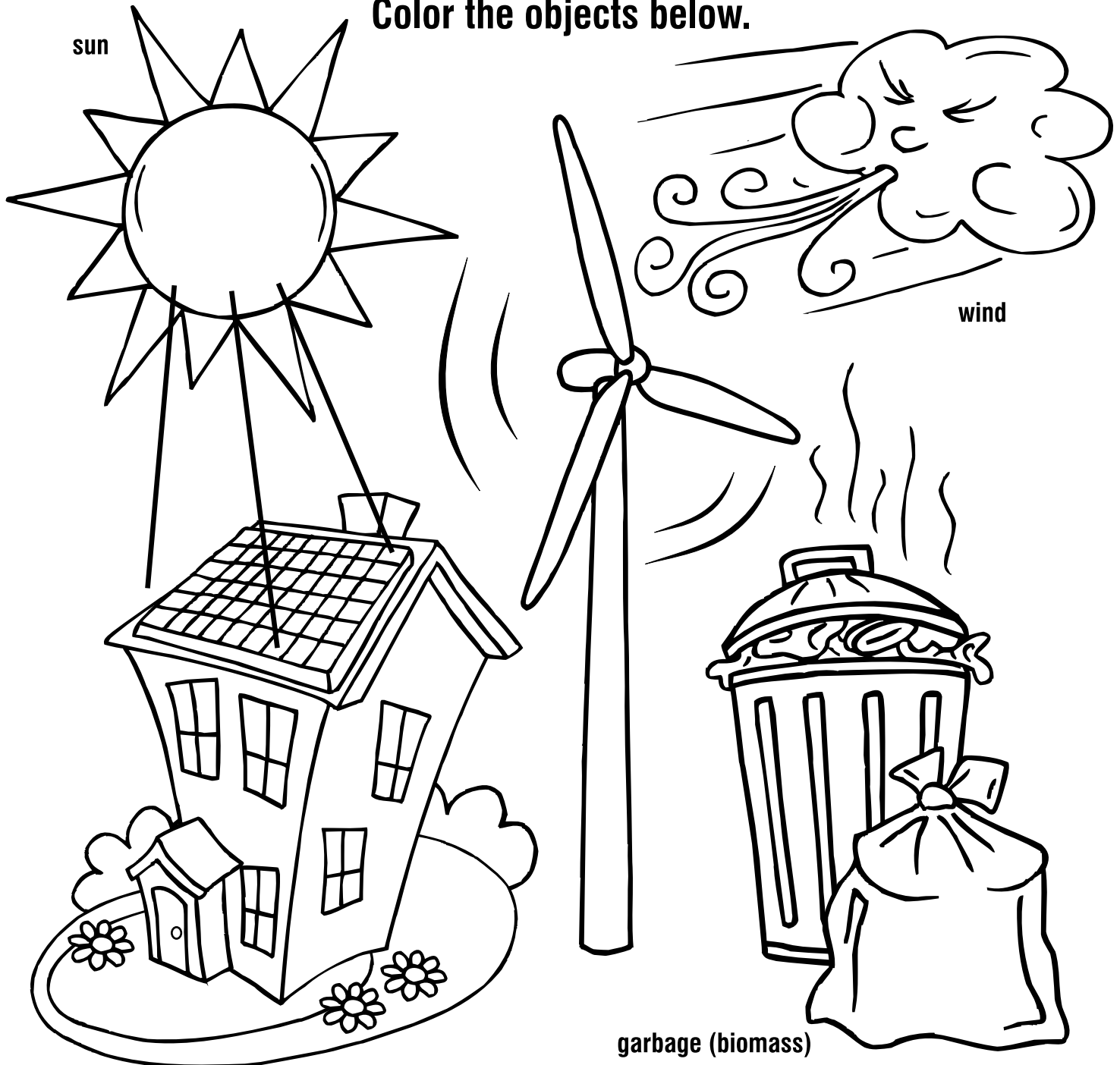
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P	P	V	F	V	L	O	Q	H	N	N	T	N	E	S
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T	W	C	S	Z	O	G	P	L	G	V	O	E	I	E
V	Z	D	S	R	Y	B	P	L	Y	P	L	Z	O	N
S	O	Y	I	U	Y	R	A	I	V	E	M	D	M	E
A	U	Z	L	R	A	R	P	A	C	O	F	E	A	W
K	I	N	P	E	U	X	W	T	T	R	I	G	S	A
R	N	P	L	T	O	Y	R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

What is renewable energy?

Renewable energy is created from resources that never run out,
like the sun, wind, and biomass (garbage).

Using resources like these to generate electricity is
good for the environment.

Color the objects below.



What is solar energy?

We get solar energy directly from the sun's rays.

One way to generate power from the sun is with photovoltaic (PV) systems using solar panels. When rays of sunshine strike a solar panel an electric current is created.

Find the 8 differences in the two solar pictures below.



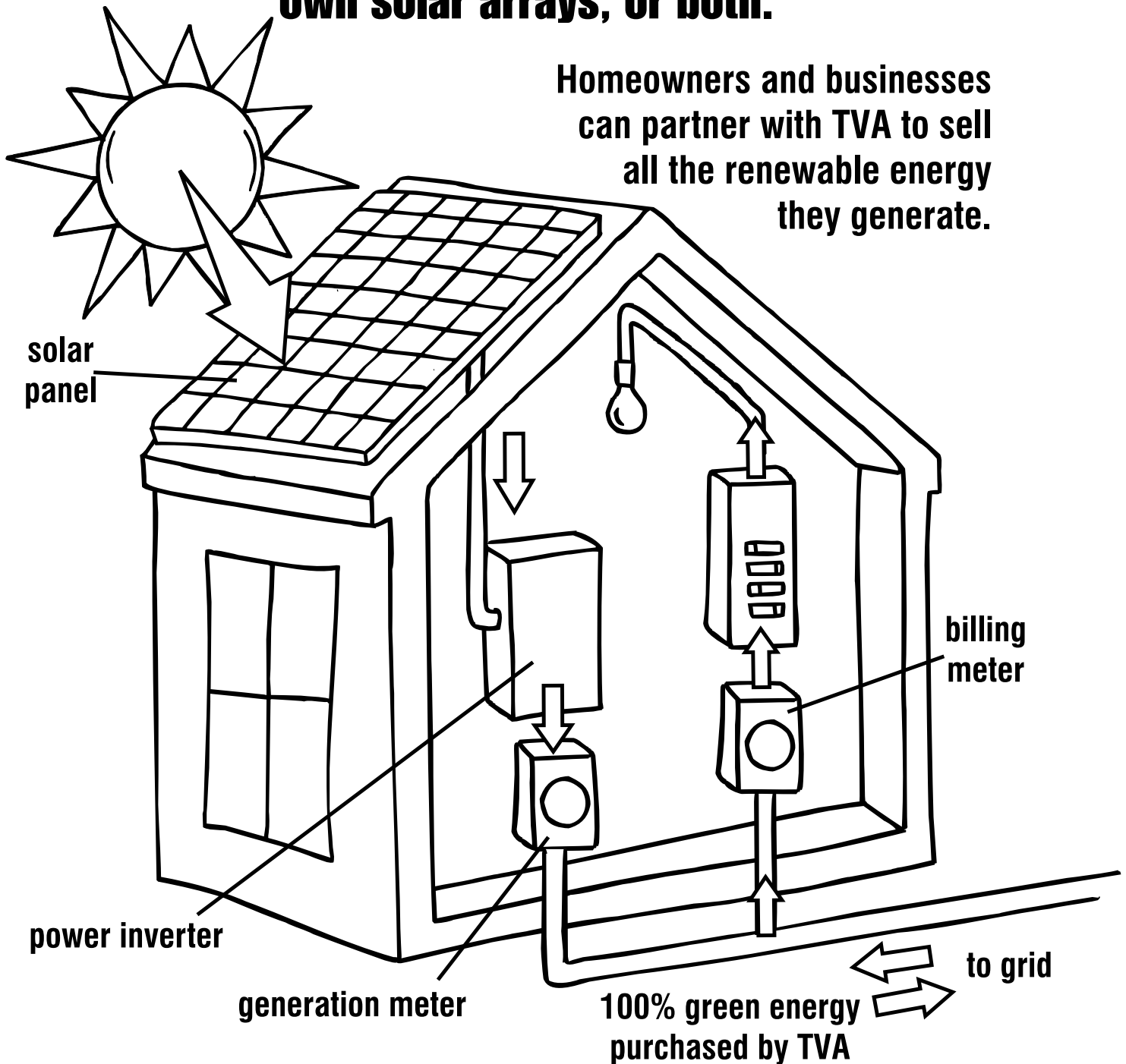
Fun fact:

The sun is strong enough to fry an egg from 93 million miles away.

Solar Panels

Power companies like TVA can purchase renewable energy from homeowners and businesses, install their own solar arrays, or both.

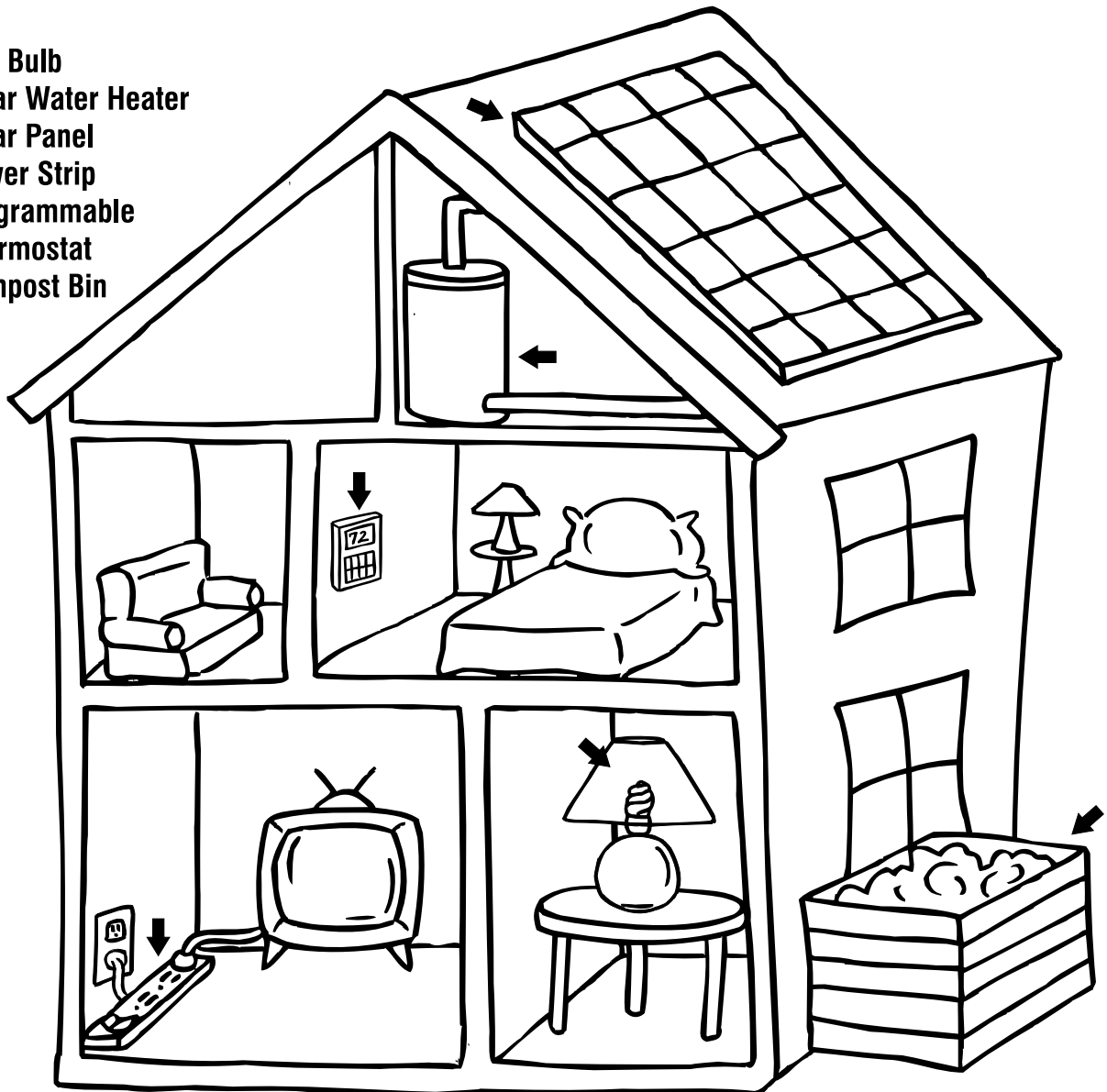
Homeowners and businesses can partner with TVA to sell all the renewable energy they generate.



Wise Use of electricity

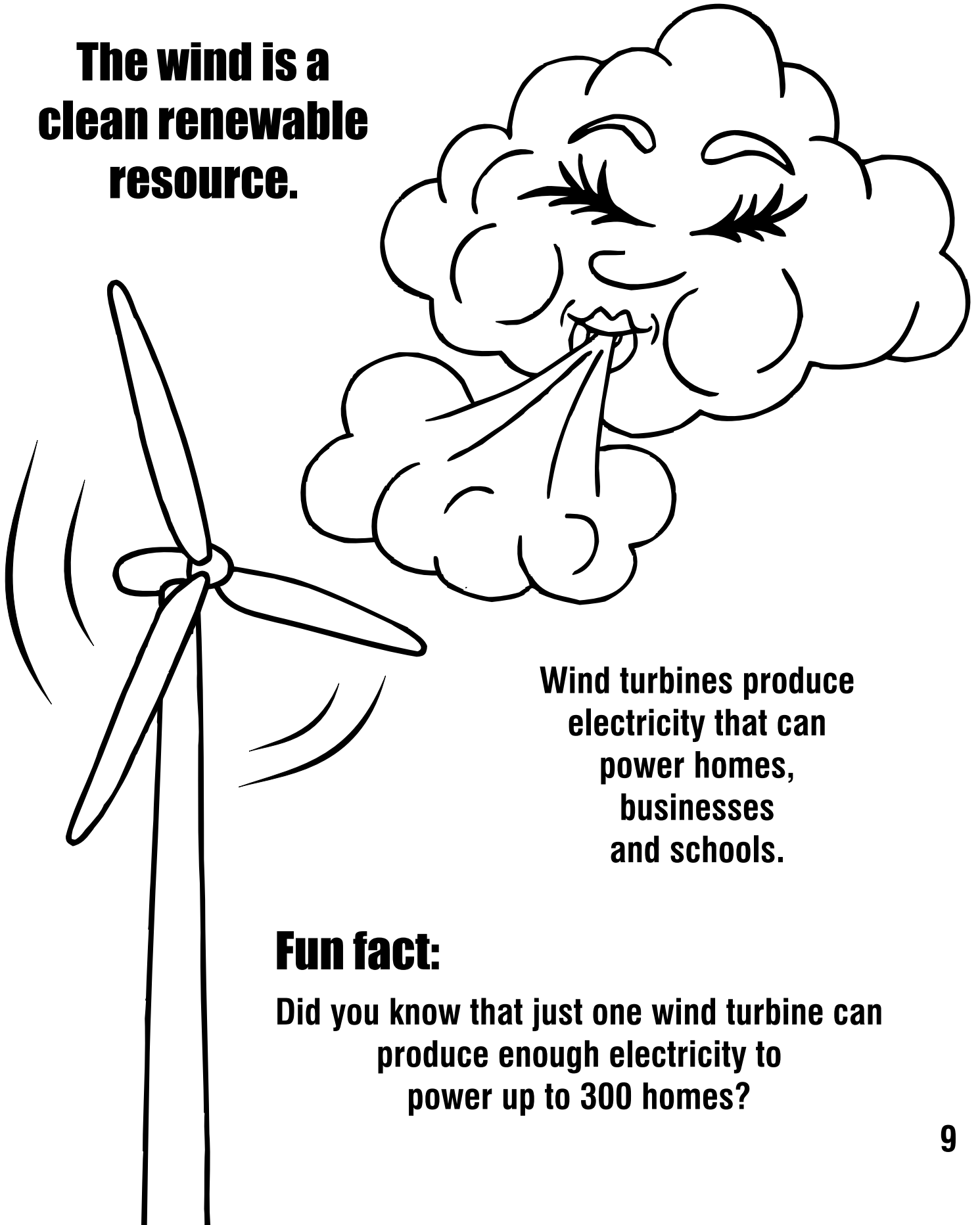
We should use energy wisely. Energy is not free.
One day we will run out of natural resources.
Circle the 6 wise uses of electricity in the picture below.

1. CFL Bulb
2. Solar Water Heater
3. Solar Panel
4. Power Strip
5. Programmable Thermostat
6. Compost Bin



What is wind power?

**The wind is a
clean renewable
resource.**



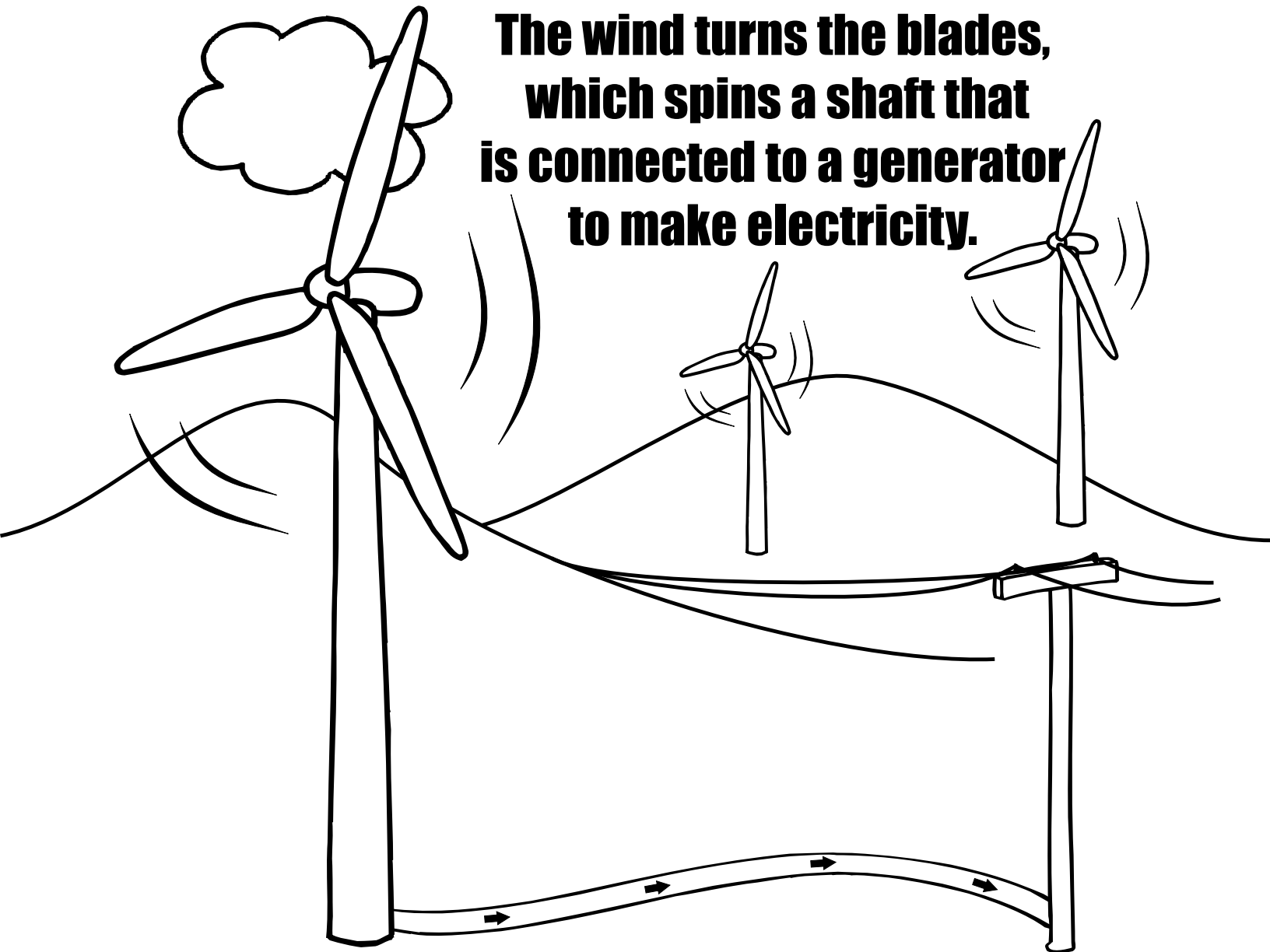
**Wind turbines produce
electricity that can
power homes,
businesses
and schools.**

Fun fact:

**Did you know that just one wind turbine can
produce enough electricity to
power up to 300 homes?**

How does a wind turbine work?

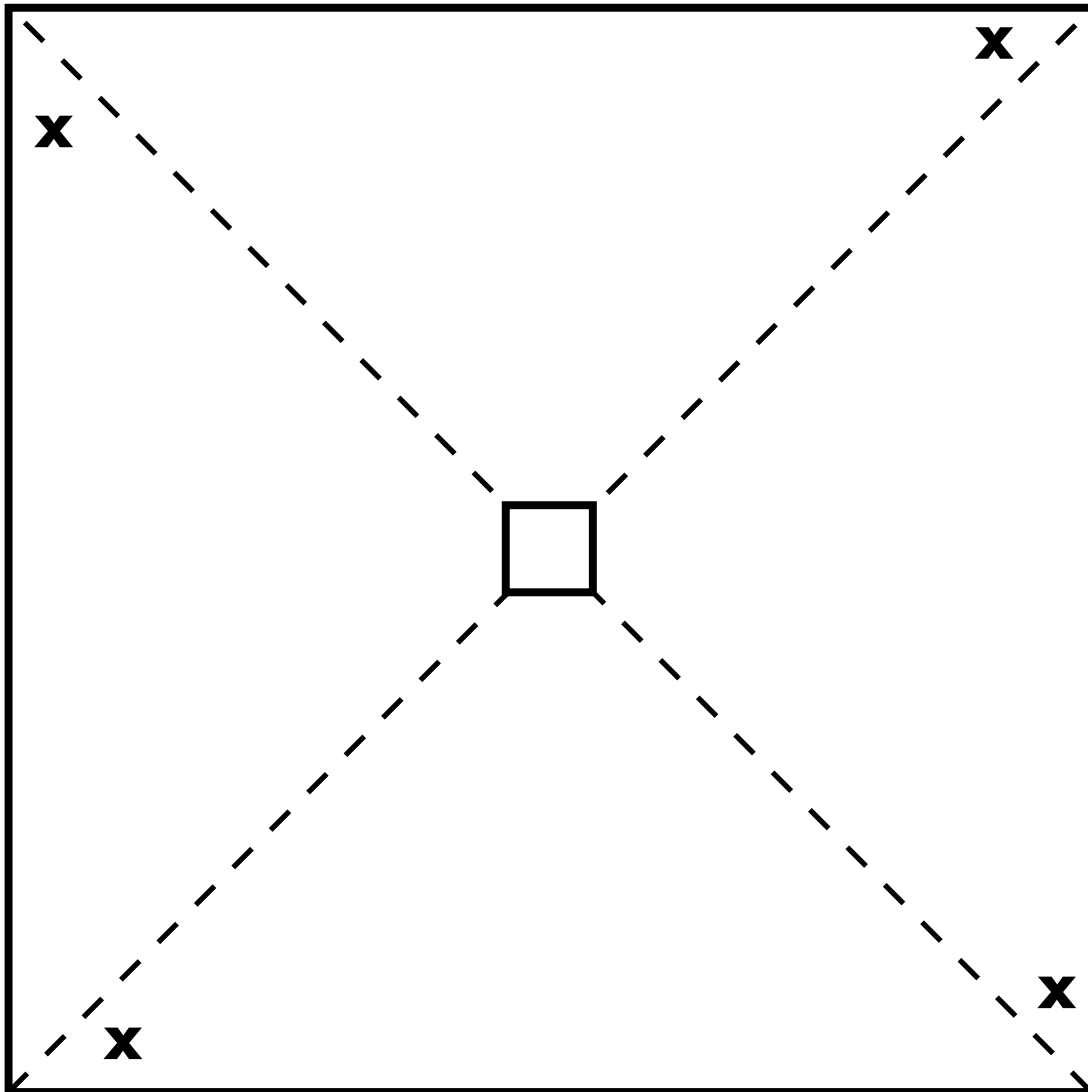
**The wind turns the blades,
which spins a shaft that
is connected to a generator
to make electricity.**



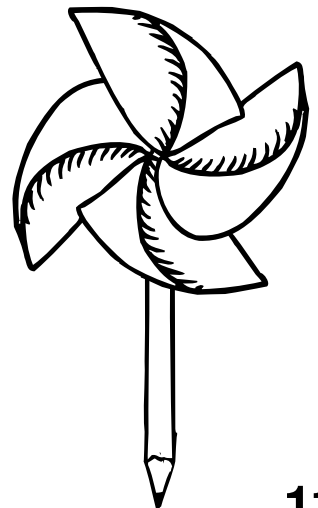
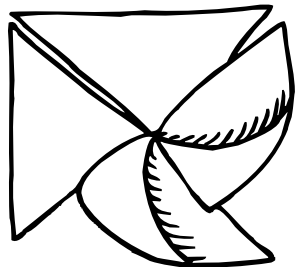
Fun fact: TVA's wind turbines are about 260 feet tall!

Make your own windmill!

Just color, cut and pin!



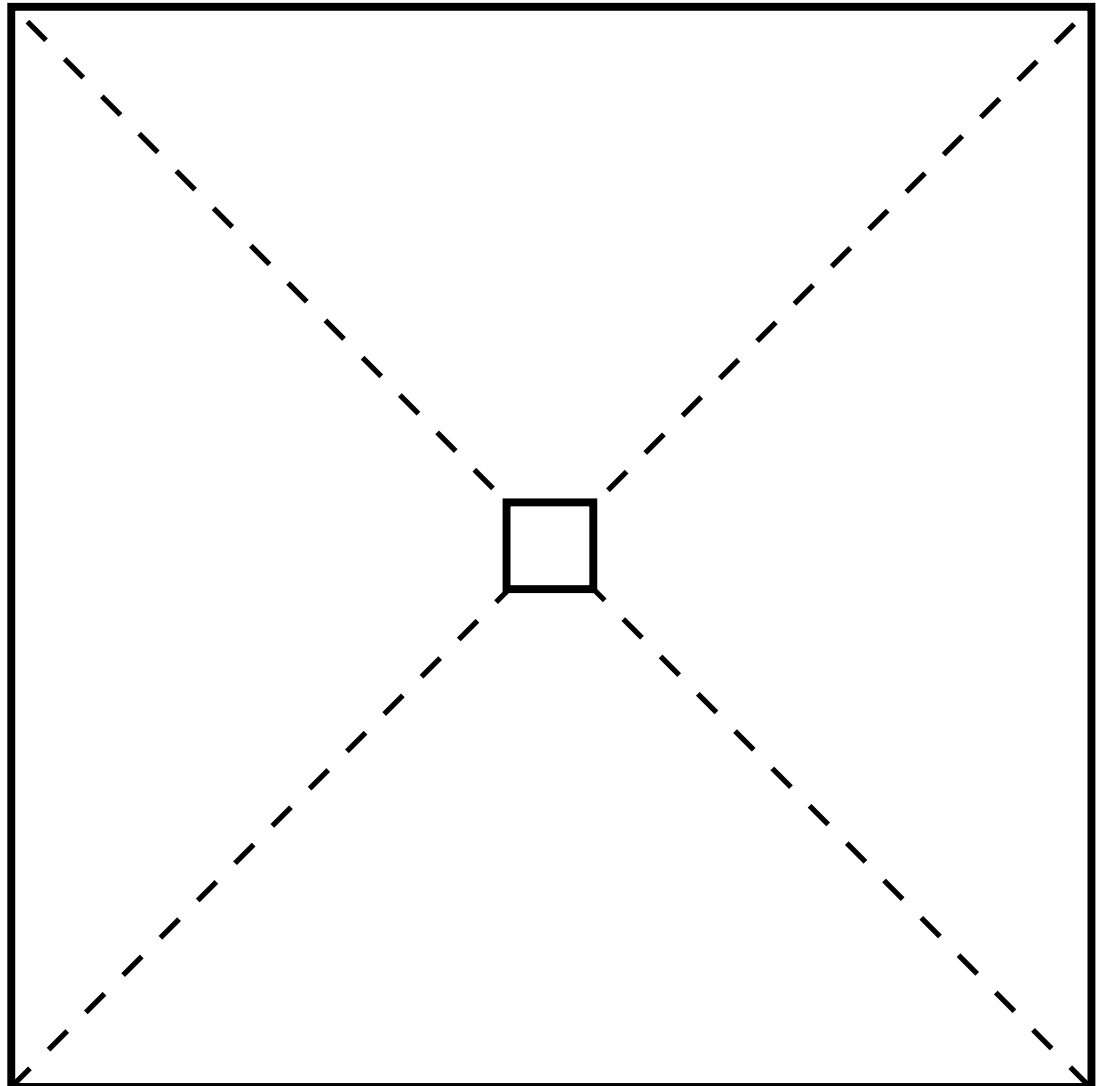
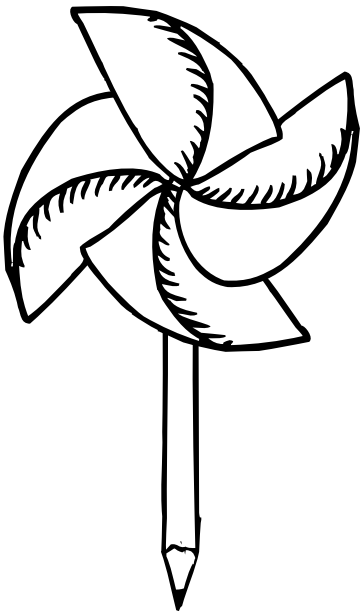
1. Cut out the square to the left and color **both** sides.
2. Cut in at each corner to the inside square.
3. Fold up corners marked x.
4. Pin corners to the center.
5. Pin onto eraser of pencil.



Make your own windmill!

See other side for instructions

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What is biomass?



**Biomass is
organic
material
made from
plants
and
animals.**

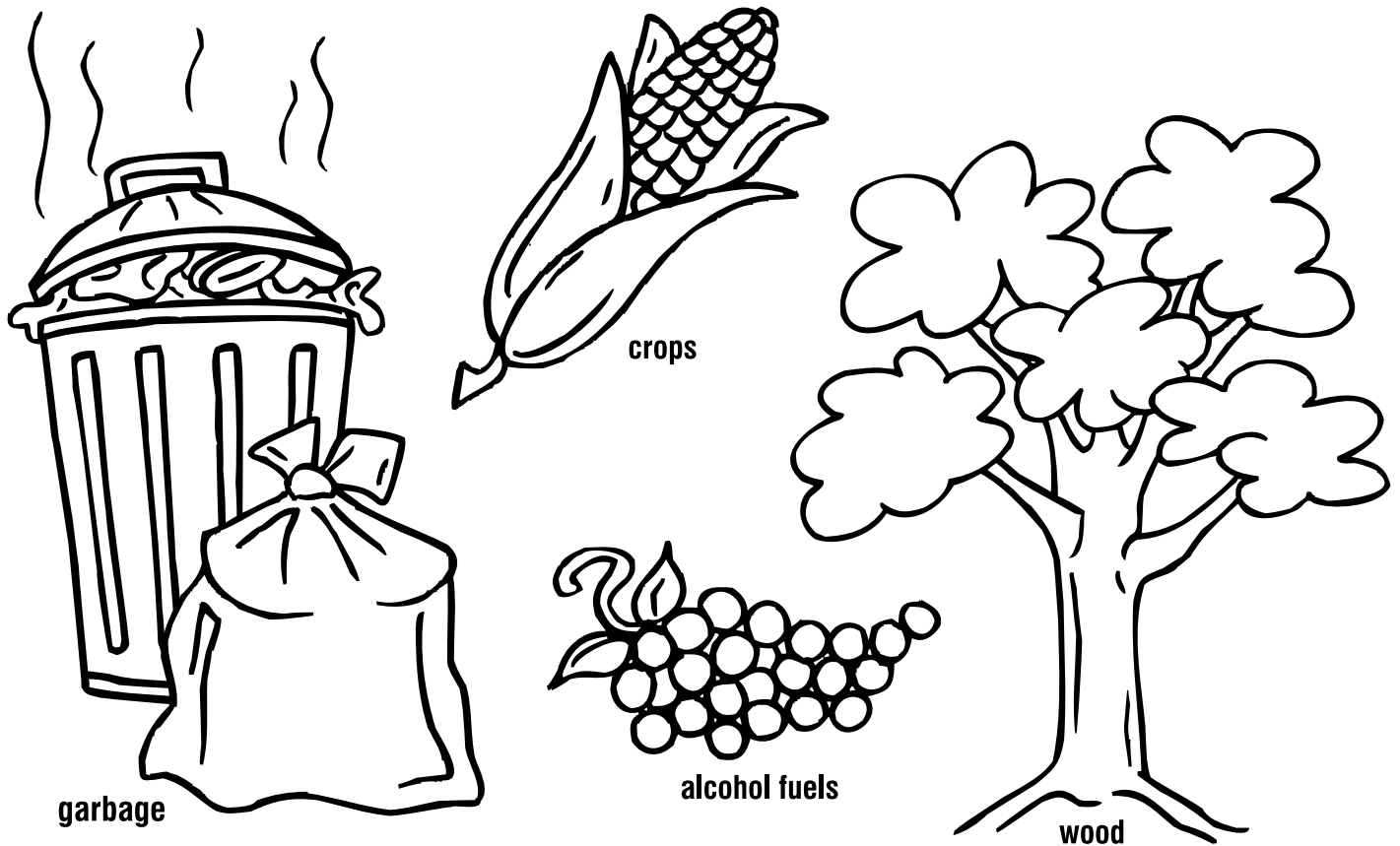
Fun fact:

**Almost half of the
renewable energy
produced in the
United States comes
from biomass sources,
like wood and
paper products.**

Types of biomass

**Biomass contains stored energy
from the sun.**

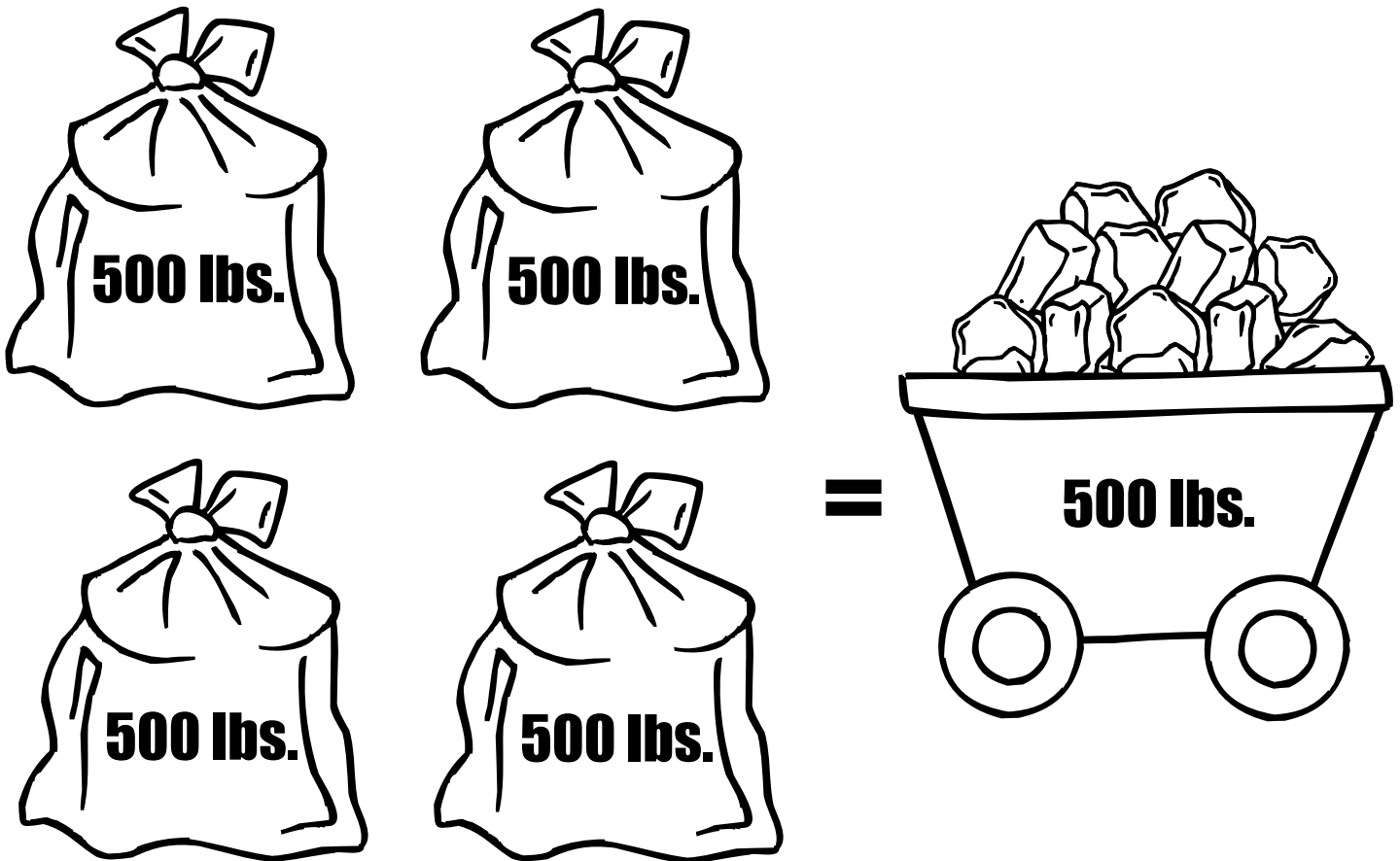
Biomass is a renewable energy source because we can always grow more trees and crops, and waste will always exist.
Some examples include:



Biomass or methane gas, made by the breakdown of organic material, can be burned to make renewable electricity.

Biomass Energy

**It takes 2,000 pounds of garbage to
equal 500 pounds of coal
in heat energy.**



4 x 500 lbs. = 2,000 lbs.

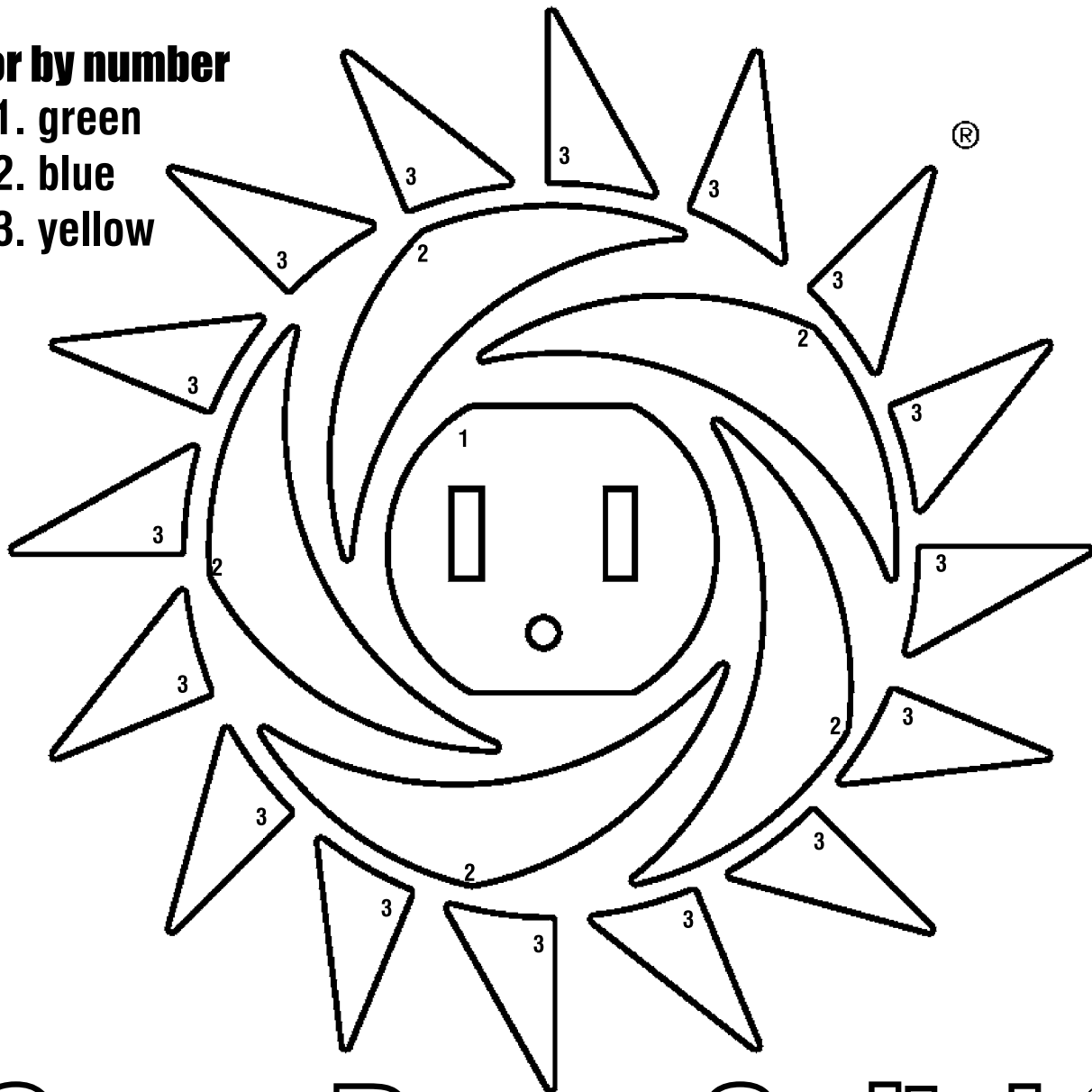
Fun fact: 1200 homes can be powered for one year with
1 million tons of garbage.

What makes green power GREEN?

Resources like sun, wind and biomass produce energy for today
and renew themselves for tomorrow - like a growing plant.

Color by number

- 1. green
- 2. blue
- 3. yellow



Green Power Switch®

Ask your parents to buy green power for your home! For more info visit www.greenpowerswitch.com
(You'll get a cool, FREE window sticker and will feel good about saving our planet!)



Green Power Switch[®]

An EnergyRight[®] Solution

www.greenpowerswitch.com

tvakids.com

To learn more about how TVA generates solar power visit
www.tva.com/greenpowerswitch/solar_sites.htm

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