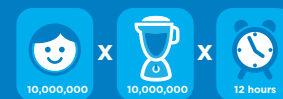


SUN-TRICITY

People use a lot of electricity

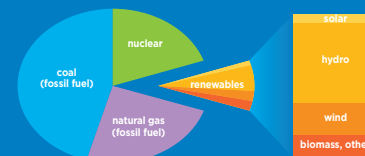
If you and 10 million friends made smoothies in 10 million blenders for 12 hours a day for a million years, you would use the amount of electricity the US consumes in a year. And it would be noisy. Fortunately, more energy hits the earth every hour - as sunlight - than we use in an entire year. One way to tap that power is to convert sunlight directly into electricity using solar panels.



X 1,000,000 years = U.S. usage/year

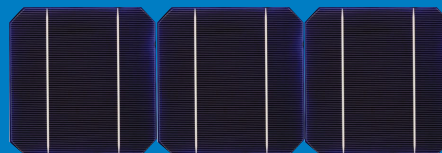
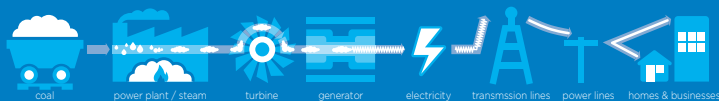
In this country, most of our electricity is generated using fossil fuels

10% is from "renewable" sources which replenish themselves - like sunlight. But currently, **only about three 1000ths** of our electricity is created through solar energy. About 45% of our electricity is generated by burning coal.



It takes energy to make electricity

If you've had a cook-out, you know that we don't get electricity directly from coal. We have to transform its energy. Here's how: we dig it up, haul it to power plants, burn it to boil water, use the steam to turn generators which make electricity... which we run through wires to houses and business and machines. All those steps take energy. In fact, of the total energy consumed in America, about 39% is used to **generate** electricity.



The Photovoltaic effect

When sunlight hits certain materials, electrons are released, which we can harness as electricity. This is called the photovoltaic effect. Photovoltaic solar panels like ours are made from silicon, the same plentiful element we use to make computer chips.

See the orange and blue solar sculptures – look outside

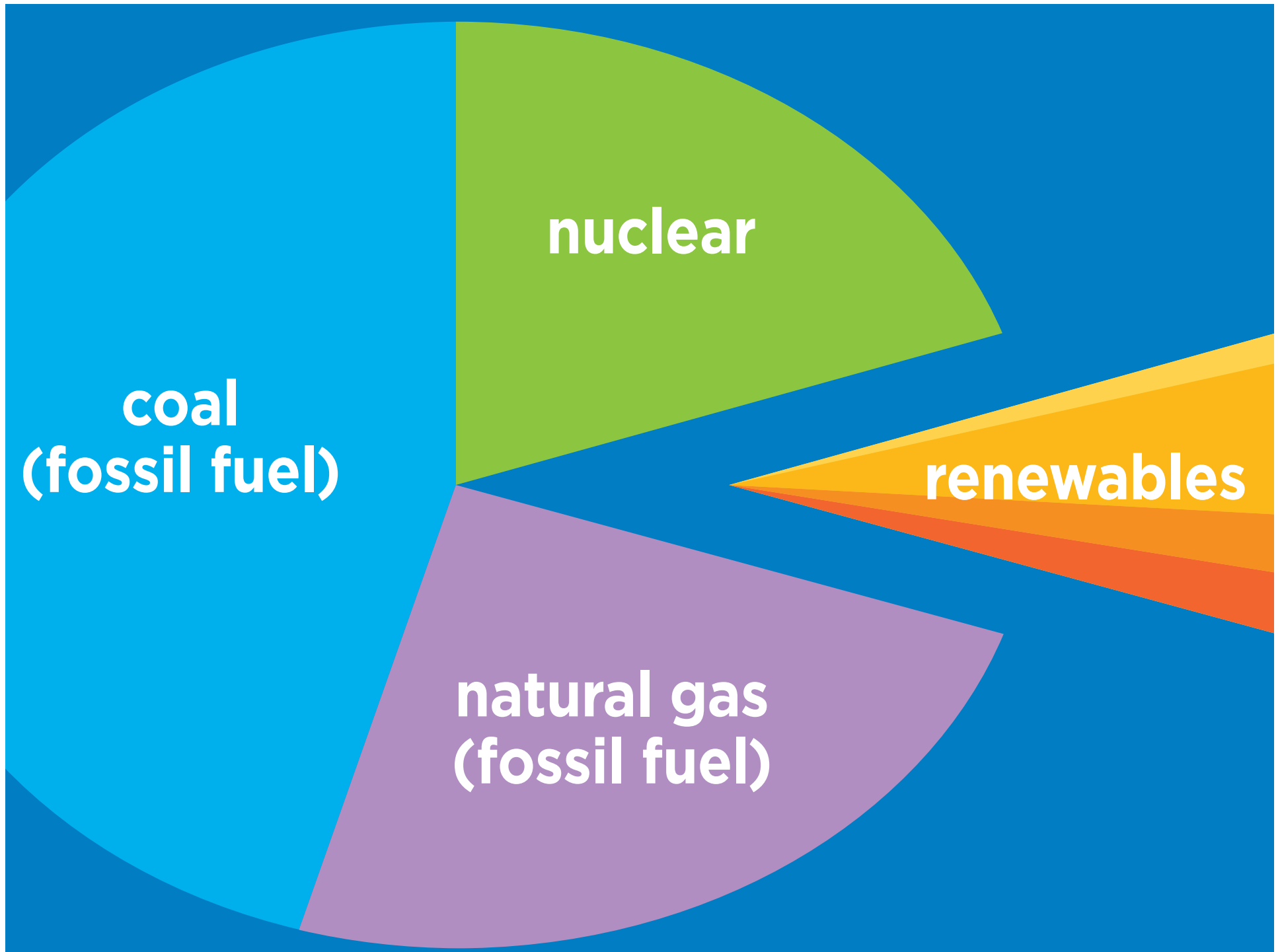
They are creating electricity right now, energy which Discovery Place uses to run air conditioning, lights, and our electric car charger.

The more directly sunlight hits a solar panel, the more electricity it makes. The panels on the orange "tree" point at the summer sun, high overhead. The blue "tree" is pointed at the winter sun, which is lower in the sky. You can see the difference this makes by using the touch-screen on your right. Which solar "tree" is making more power? What happens when the shadows of tall buildings or clouds cover the panels?

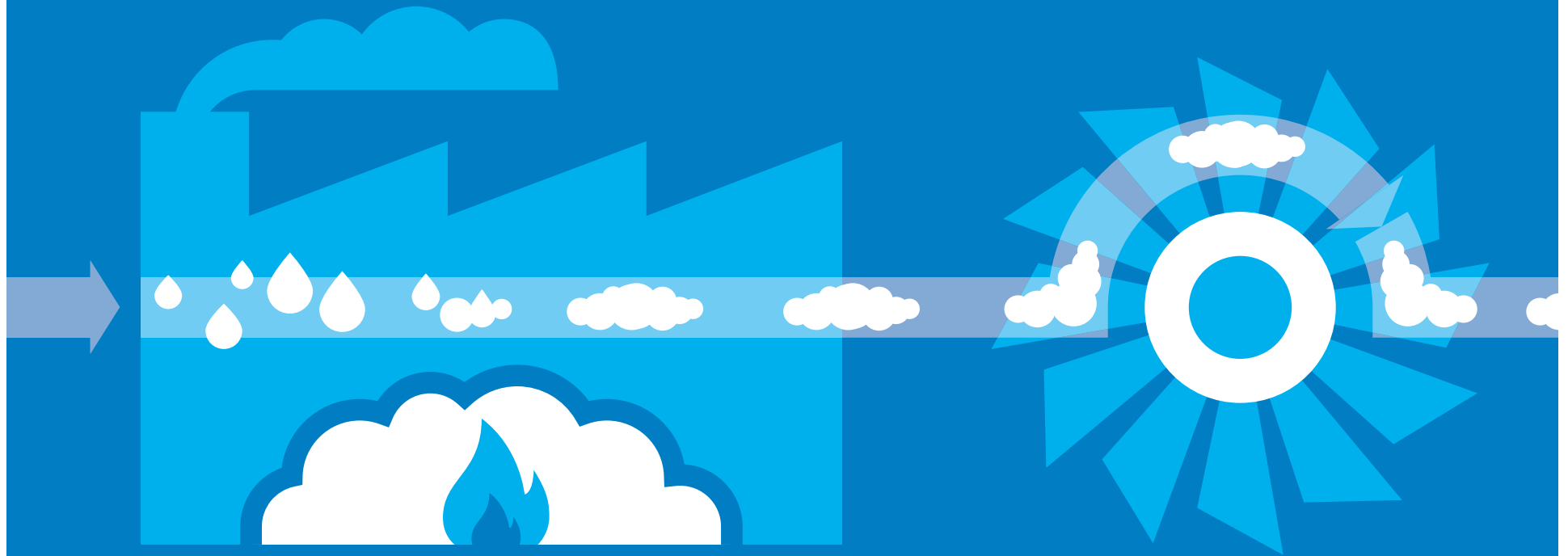
In this country, more is generated using

10% is from “renewable” sources

But currently, **only about three 1**
through solar energy. About 45%
burning coal.



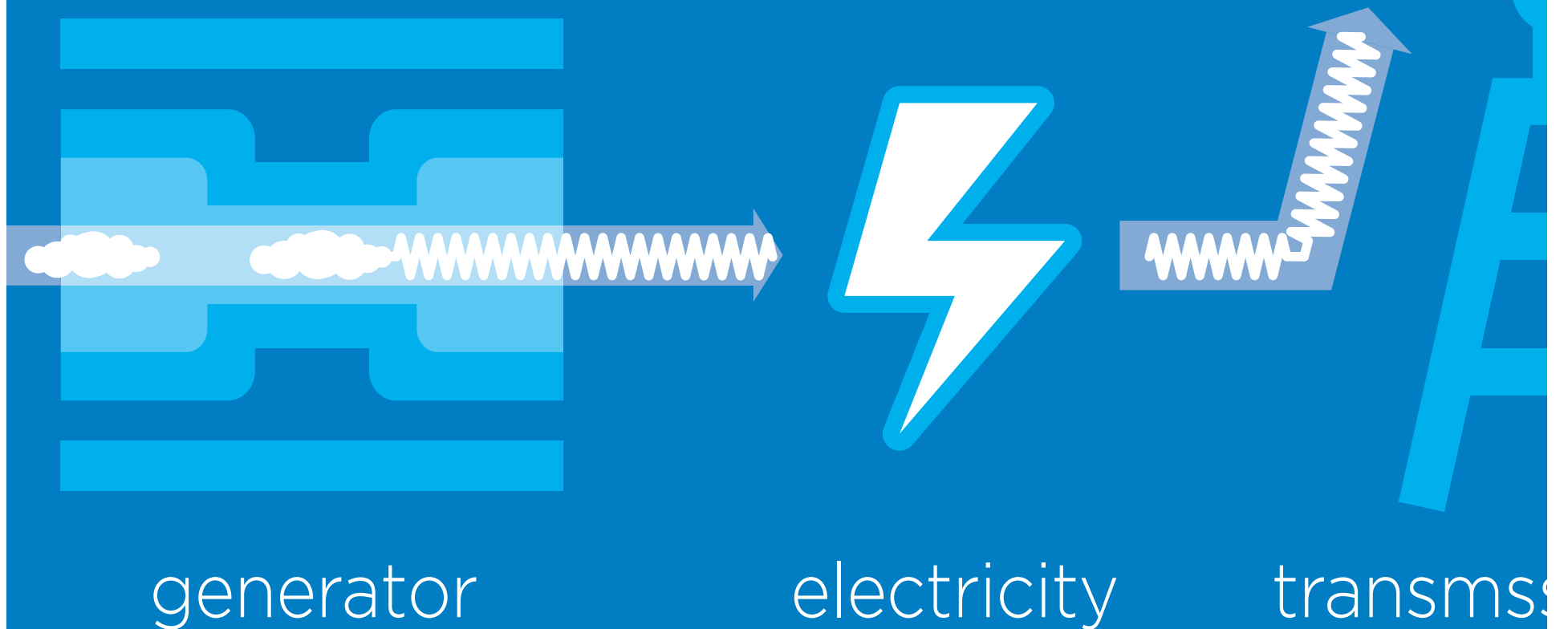
which we run through wires to house
energy consumed in America, about



power plant / steam

turbine

ses and business and machines. All
ut 39% is used to **generate** electricity



**the orange
solar sculpture
outside**