

How is coal used?

Eighty-seven percent of the coal mined in Illinois is used to make electricity. Coal is also used to produce coke. Coke is used as fuel when making steel.

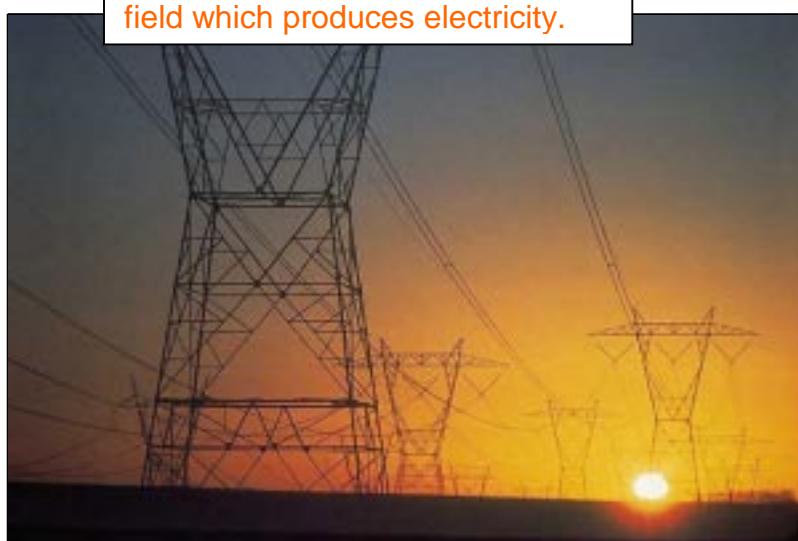
Power plants burn coal to produce heat energy. Heat changes water to steam. The steam turns a turbine's blades.



The blades of the turbine (above) spin the generator. The picture at the right shows the inside of a large generator. The spinning generator has an electromagnetic field which produces electricity.



Photo credit:
Prof. Carl Lira, Mich. State Univ.



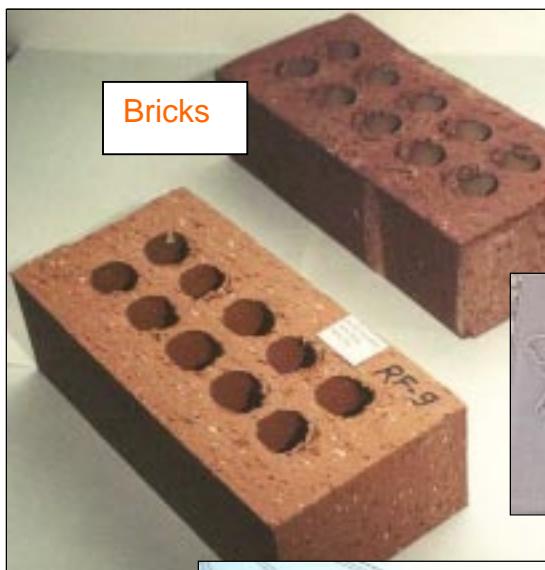
Electricity is carried through power lines and distributed to homes and businesses.

We use electricity every day in many ways. Some examples of how we use electricity are heating, cooling and lighting our homes, and cooking and refrigerating our food. **How do you use electricity?**

About half of the electricity in the United States comes from burning coal.

Burning coal to produce electricity creates byproducts. Many of the byproducts are used in the construction industry. Coal byproducts are used to make items such as: concrete, soil cement, road construction materials, masonry, roofing materials, insulation materials, wallboard and as a mineral filler for plastics, paint, rubber matting, carpet backing and asphalt.

The pictures below show how some of the ways coal byproducts are used.



Coal = Sum Difference



9	7	5	8	1	9	3	10
-1	+5	+4	-6	+9	+2	+7	-3
8	7	8	9	11	8	6	8
+6	-6	+1	-3	-3	+2	-1	-4
8	3	12	4	10	9	10	
+1	+3	-4	+5	-4	+4	-7	

Letter Code

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Y	H	L	F	S	O	R	M	C	E	N	U	A	G

DIRECTIONS: Add or subtract the problems and then find the answers in the letter code. Put the letters on the dotted lines. Write the decoded sentence on the line below.
