

Small But Mighty - Microgrid Map



Your block is currently connected to the “traditional” grid with access to the many renewable and nonrenewable energy sources available in the region. Your neighborhood's utility meters are all smart meters. However, your neighborhood has received a grant to turn your block into its own smarter, renewable microgrid. Before your block makes any moves, the planning organization wants to see how residents would plan out and place their new energy equipment.

- A microgrid is a smaller, local group of power users connected to their own local electricity generators. The microgrid acts like its own “island” in the traditional grid. It can remain connected to the traditional grid or act by itself. Microgrids can help lower energy costs and reduce environmental impacts.
 - Your new, upgraded microgrid for your block must show where you’d place solar panels, a wind turbine, a small waste-to-energy plant, any power lines, and any smart meters.
1. Below, draw a sketch of what your block or neighborhood looks like, including houses, schools, and any businesses.
 2. Where will you place your generators? Draw them on the map.
 3. Draw any power lines and smart meters, and any other power equipment you might need.
 4. Label the items on the map or incorporate a map key.
 5. As a challenge, make your own conductive dough and use a battery and holiday lights to showcase the electrical infrastructure in your new, smarter microgrid neighborhood.

A large, empty rounded rectangle with a thin black border, intended for students to draw their neighborhood sketch and microgrid plan.