

# Resilient Communities Maryland Microgrid Game

Welcome to the Microgrid Game! You're going to select locations where the power should stay on when a disruption causes power to go out elsewhere - you're building a **microgrid**!

Your group's goal is to choose locations that provide the most benefits to the most people during a major disruption, while keeping costs down. Larger microgrids can include more facilities that could provide benefits to communities, but the larger the microgrid, the higher the cost.

This game has three steps: **practice, creation, and selection.**

## Step One - Practice

Practice using the interactive map. Hover over any location to see more information about it.

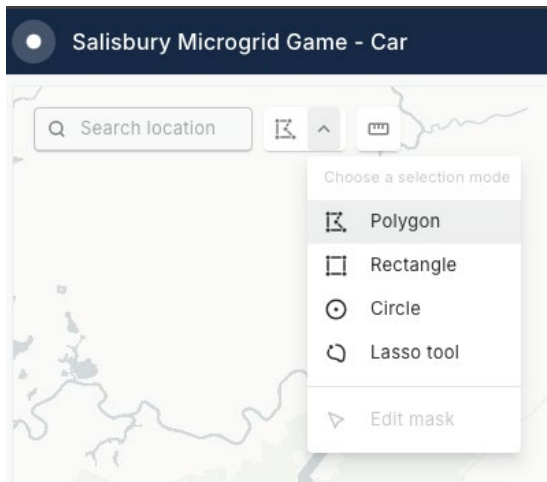
Click on a Service Location Type to see only that type of location. Here are the map components:

The screenshot shows the 'Microgrid Game Read-Ahead' interface. The map displays a region around Rockville, MD, with numerous green dots representing service locations. Red arrows point to specific map features: 'Mask Tool' (a search bar), 'Measuring Tool' (a measurement icon), and 'Individual Service Facilities' (a red outline on the map). A 'Zoom Level' control is visible in the bottom left. On the right, a 'Service Location Type' widget displays a list of facility types with their respective counts:

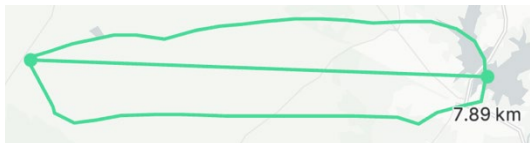
Service Location Type	Count
Place of Worship	78
Child Care Center	54
Bank	37
Grocery Store	37
Public School	26
Others	79

A search bar at the bottom of the widget allows searching in 15 elements.

Use the Mask Polygon Tool to draw a polygon around any cluster of service locations. Click once to build the polygon shape, double-click to finish the polygon.



Use the Measuring Tool to measure the length of the longest side of the polygon, like this:



Answer the following questions:

1. What types of locations (e.g., grocery store, hospital, gas station, etc.) are included in your polygon? *Please make sure to note the number of facilities!*

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2. What percent (%) of the area's service access is provided by the locations in your polygon? (Hint: Look in the right-hand panel titled "Widgets")

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3. How long is the longest side of your polygon?

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## Step Two - Microgrid Creation

Explore possible microgrid locations and document information about each. Use the Mask Polygon Tool to experiment with at least 5 different clusters of locations. Keep in mind:

- What kinds of services are provided by the locations included? Households need access to service categories like Provisions, Health, Public Safety, Shelter, and Workforce.
- What level/quality of service is provided by each location?
- How many households are near the microgrid? Which households would benefit the most from the microgrid? Which would benefit the least?
- What proportion of the community could this microgrid realistically serve during a long, widespread power outage?
- The more locations included in the microgrid, and the further away those locations are from each other, the more expensive the microgrid will be.

**Fill out the online form** about each of the microgrids you created using the link provided by the engagement team.

**NOTE:** Please fill out the form and click “submit” separately for **each of the microgrids you created**. You will revisit these microgrids and make final decisions in Step Three.

### Step Three - Selection

Decide which of the microgrids would be the best investment for your communities.

Review the spreadsheet that contains information about all the microgrids your group considered in Step Two.

**Choose your top 3 microgrids from the 5 that you created.** Answer the following questions with your group:

*Selection 1:* \_\_\_\_\_

*What would it cost?* \_\_\_\_\_

*What would you get?* \_\_\_\_\_

*Why did you select it?* \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

*Selection 2:* \_\_\_\_\_

*What would it cost?* \_\_\_\_\_

*What would you get?* \_\_\_\_\_

*Why did you select it?* \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

*Selection 3:* \_\_\_\_\_

*What would it cost?* \_\_\_\_\_

*What would you get?* \_\_\_\_\_

*Why did you select it?* \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_