

SIEMENS

Smartflower Microgrid Backgrounder

What's a Smartflower?

A Smartflower is an intelligent solar-powered energy system. Every morning at sunrise it unfolds itself to follow the sun across the sky, maximizing the amount of electricity absorbed. This makes the Smartflower 40% more efficient than other systems and capable of producing 4,000-6,400 kWh/year.

What's a microgrid?

Microgrids are powerful electrical distribution systems that can be used to power city blocks, facilities or, in this case, a classroom and accompanying electrical box.

Microgrids can generate, distribute, and control power in a campus setting, a small community, in critical infrastructures, military institutions, commercial and industrial areas, remote locations, and on islands.



Sunrise – Open

Smartflower automatically unfolds, directs its solar modular fan toward the sun, and begins producing electricity for you.

All day – Follow

The modular fan follows the sun throughout the day, staying at the optimal angle for energy production, even when it's cloudy.

Sunset – Close

Once the sun goes down, Smartflower automatically folds itself into a secure position and waits for sunrise.



The Smartflower MG at Bishop James Mahoney High School uses a custom-built educational system created by Siemens Canada and educational curriculum developed by educators to power the classroom and empower minds.

A switch in the classroom controls the source of power to the room and the Siemens microgrid displays the status, functions and interplay between the Smartflower, battery storage and classroom.

The Smartflower curriculum centres around hands-on access to and experiments with solar panels, battery storage and grids, expanding the possibilities of green technology and new career paths in computer science, electrical work, data science and others. Siemens Canada provides technical expertise to students through demonstrations and presentations.

The goal is to spark interest in STEM (Science, Technology, Engineering, and Mathematics) and green technology.



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